

PRIX EDITIONS

International Formula One Monthly



THE MAGAZINE FOR
GRAND PRIX PEOPLE

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THE SAFETY ISSUE

The aftermath
of Jerez

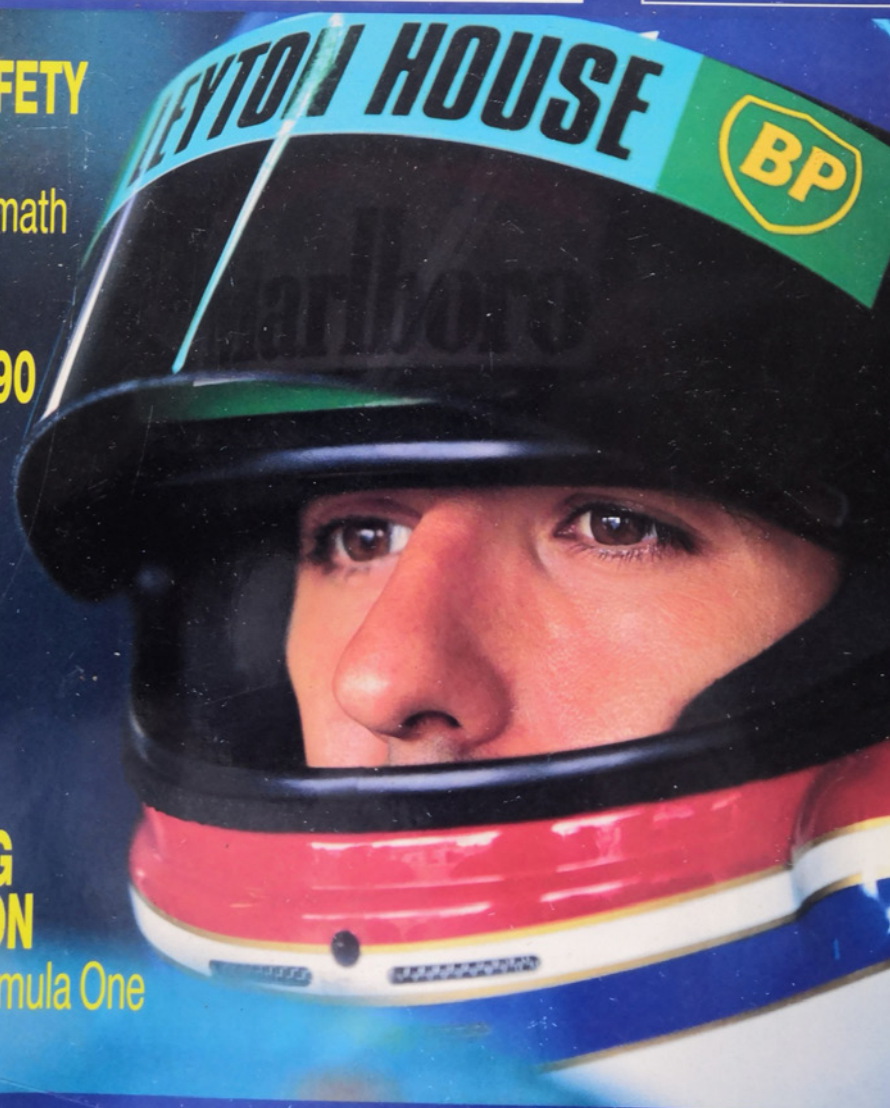
ITALIA '90

Nannini's
No to
Ferrari

Capelli:
Coming
to terms

BURNING QUESTION

Fuel in Formula One



"VAUXHALL'S STUNNING START TO THE NINETIES."



A nanny became a Princess. A Boomtown Rat became an Honorary Knight. And, to cap it all, Wimbledon won the Cup.

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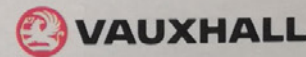
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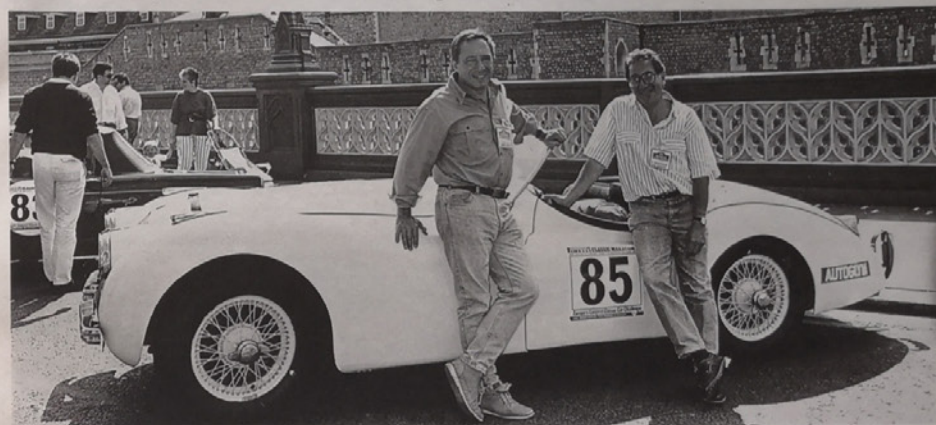
David's Polish

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POLE POSITION

The Editor's Page

Once upon a time there were two young men. Born in the same year, 1964, they had a great many other things in common. For one thing, they both spoke with a strange accent, even though they came from countries far apart. They shared a common ambition, too: each wanted to be a famous racing driver.

And so they did, to the point where they ended up working together for the same racing team in a Formula called 3000. And great was the success of it, for each of these young men was exceedingly gifted, and the team they drove for had the best equipment, the best manager, and one of the best sponsors.

And the coincidences continued, for they both graduated to Formula 1, not only in the same year, but in the very same race: the French Grand Prix of 1989. One of them was lucky, for he knew the circuit, and the team he drove for - Tyrrell - was enjoying something of a resurgence; the other was less fortunate, for the team he drove for - Arrows - was in the midst of another difficult season.

The first one became an overnight success, running as high as second at one point, and finishing fourth in his first Grand Prix. The second one found life harder at the top, but stuck to his task, made no fuss whatsoever and did the job to the best of his considerable ability.

The first one stayed in Formula 1, returning occasionally to F3000, just often enough to become champion in that category; the other played a waiting game, content to be a test driver first of all. But both signed up for their first full season in Formula 1 at the start of a brand new decade.

Just to keep the coincidences going, both were now part of a famous British racing team. The second one might have felt the gods were with him, for his team - Lotus - had continuing sponsorship from the brightly-coloured Camel, a new 12-cylinder engine from Italian specialist Lamborghini, and an all-British driver partnership of experience, no little

charm, and great potential.

Life, for the other one, might have been something of an unknown quantity: his team - Tyrrell - was in the midst of a renaissance, that is true, but with that came all the uncertainties associated with new personnel, an old engine, and a partnership with an Oriental driver not known for his powers of communication.

And yet it was this one who prospered: even to the point of leading the first race of his first full season, in Phoenix, and finishing a brilliant second on the day - while the other one suffered a dispiriting failure to start. The pattern of their season was established, and the first one became the new hero of the hour.

So much so, in fact, that he was not content to stay where he was, but went seeking fame and fortune on the strength of the few Grands Prix in which he had driven. One contract was not enough; just in case that did not work, he took the precaution of signing several. And all this time the second one was quietly working away, annoying no-one, impressing his team

with the unassuming presence he had established, and leading his experienced teammate to believe that here was a talent bound to find its niche in Formula 1. And then they learned they had no sponsor for 1991, no engine either, and that the bright new dawn for the Lotus team had withered before it began.

The first one, meanwhile, was securing the drive of a young man's - any man's - dreams, for with the help of lawyers, press conferences, no little arrogance and a lot of obstinacy, he had become the partner, not only of Alain Prost, but of Ferrari. And a few days later the second one's dreams were in ruins, like the car that catapulted him into the barriers at 280 km/h, and broke his legs and his future in as much time as it takes to sign a contract.

And while Jean Alesi looks forward to 1991, fame and fortune, everyone at *Prix Editions* wishes Martin Donnelly a speedy recovery and the chance of making it back to the place where, just as much as the first one, the second one belongs.

PE



Colin Cocker

KEEPING TRACK



Major Moments (Mainly Mansell) from a Mixed-up Month!

August 30, London: Ivan Capelli begins to emerge as the new favourite to succeed Nigel Mansell at Ferrari. The Italian is known not to have signed for Leyton House and has made it clear he would look favourably upon the opportunity to drive for the Maranello-based team.

September 3, London: Various reports say Mansell is connected with a whole range of potential offers to remain in Formula 1 next year, or switch to another Formula.

September 4, London: Rumours start circulating that Lotus will lose Lamborghini power in 1991 with the Italian engine manufacturer supplying only Ligier. The news will be confirmed at Monza at the end of the week.

September 5, Monza: Stefano Modena's name joins the short list of Italians waiting to hear from

Ferrari. Yet more rumours suggest, however, the Englishman is poised to reconsider his retirement decision and may be on his way back to the Canon Williams team he left in 1988.

September 6, Monza: Mansell keeps speculation alive over a potential u-turn by disclosing that he has received more than a dozen attractive offers for his services, including one from CART. On the same day Frank Williams is again linked with Mansell.

September 7, yes, you've guessed it, Monza: Mansell attempts to end speculation by telling an impromptu press conference he has no intention of changing his mind about quitting F1 at the end of the year. "Nothing will keep me in Formula 1", he states. Frank Williams says he intends keeping Jean Alesi to his word and signature by refusing to release the

Frenchman from his contract to drive for Canon Williams in 1991 if Alesi leaves Tyrrell. Williams adds that he has not renewed the contracts of Riccardo Patrese and Thierry Boutsen.

September 8, where else?: It is confirmed that Rory Byrne has resigned as Benetton's designer and is leaving the team. He has received an offer he cannot refuse, says a spokesman, from Reynard, planning a 1992 entry into F1. Ayrton Senna claims pole position for the Italian GP with a wonderful lap in the final minute of final qualifying; Prost will share the front row.

September 9, Monza: Prost heads warm-up, but Senna wins the race with a flawless drive. The race is restarted following an horrific accident to Derek Warwick's Lotus in the Parabolica, the Englishman emerging unscathed.

September 10, London: A Reynard press release announces Rory Byrne's signing with the fledgling F1 team. "I will have a full year to design and build the car", says Byrne. "This is more than twice the amount of time I ever had at either Toleman or Benetton."

Meanwhile, in Monza - of course - Alessandro Nannini becomes the latest favourite to move to Ferrari, despite having signed again with Benetton: a two-year loan deal is said to be involved.

September 12, London: Nannini's confirmation with Ferrari is expected, but falls through at the last moment as Ferrari's lawyers are believed to have succeeded in securing Alesi's services for 1991. Talks with Nannini stall, a press release due next day is cancelled - too late to prevent Benetton sponsor The European from publishing a back-page lead on Nannini's supposed move to Maranello.

September 13, London: Nannini's move is called off without any statement.

September 14, London: A Benetton release explains Nannini wishes to stay with them. "Naturally it is every Italian's dream to drive for Ferrari", he says, "but after weighing up both opportunities I decided to stay because I feel Benetton is the team of the future." (see Nannini feature pp. 38-40)



Serious move: Modena joins Nakajima at Tyrrell

September 17, London and Maranello: Tyrrell and Ferrari simultaneously confirm that Alesi will drive for the Italian team in 1991. Canon Williams are to receive a Ferrari F1 racing car for their museum in 1992 in recognition of their part in releasing the Frenchman from his contract with them.

On the same day a Brabham release announces their three-year contract with Yamaha to contest the World Championship. The companies will collaborate on the new 1991 chassis and engine for the BT60Y powered by a Yamaha OX99 unit, a lightweight V12 with the unique Yamaha 5-valve technology.

September 20, Estoril: FOCA teams discuss proposed changes in technical regulations for 1991 suggested at Monza by FISA President Jean-Marie Balestre. They oppose most of them, including the move to flat-bottomed cars with reduced wings, alleging that most teams are already at the final design stages of their 1991 cars.

September 21, Estoril: Tyrrell announce their signing of Stefano Modena for 1991, with an option for 1992, to partner Satoru Nakajima in their new Honda-powered cars.

mate Derek Warwick's similar crash at Monza.

Donnelly, 26, is transferred to hospital in Seville with fractures to both legs and collar bone as well as serious head injuries. While his vital signs are maintained, surgeons express concern over the injuries to his left leg in particular.

When the remaining eight minutes of the session are run, Ayrton Senna brilliantly takes provisional pole in his McLaren-Honda. Next day he will secure the 50th pole position of his career.

September 29, Jerez: Thierry Boutsen is confirmed as a Ligier driver for 1991-2, which clears the ground for Nigel Mansell's expected return to Williams - as yet unconfirmed.

In a show of extraordinary bravery, Derek Warwick puts the remaining Lotus in the top ten on the grid. He will be eighth in Sunday morning warm-up.

September 30, Jerez: Alain Prost keeps the 1990 World Championship alive with a commanding victory in the Ferrari while Ayrton Senna suffers a rare retirement in the McLaren-Honda. It is the 44th victory in Prost's 167-race career.

October 1, Didcot: Canon Williams confirm their driver line-up for 1991, with Nigel Mansell returning as number one alongside Riccardo Patrese. Mansell admits he too is amazed at his decision: the prospect of a title-winning package was the decisive lure.

PE

Will he, won't he? Mansell made everyone wait



September 28, Jerez: British driver Martin Donnelly is grievously injured when his Lotus-Lamborghini crashes straight into the barriers at 280km/h during first qualifying for the Spanish GP. It is one of the worst accidents seen in F1 for many years and follows hard on the heels of team



No to Ferrari - the nerve of the man!

I used to like Terry Wogan. His morning radio programmes had about them the dry wit on which I had been nurtured in many a public house on the far side of the Irish Sea. It was a captivating mixture of fantasy and humour, stitched together with threads of truth from every-day life. Just what you needed first thing in the morning when, in those days, *The Guardian* had not been delivered to the far-flung outposts of the Home Counties due to a 'technical problem', a handy euphemism for the printers having stopped overlong in the pub the night before.

Wogan could bring a smile. His was the soft, lilting voice driving a piercing wit. It brought fame but, in the traditional ways of the radio, not enough fortune. That came when he moved to television and became a 'media personality'.

Worse than that, he became a Professional Irishman of the most noxious kind. I'd like to see him step into any hostelry in Dublin wearing one of those snappy suits and try to engage the locals in such forced and useless small talk. The Rev. Ian Paisley would probably enjoy a better reception; at least you know where you are with the Protestant Thunderer.

Wogan's television shows have become a processing house for cult figures and anyone wishing to push a book or a play; an early-evening diet of dross to accompany the washing up. I thought David Feherty summed it up best when discussing his prospects for this year's British Open at St.

ON THE OTHER HAND



THE MAURICE HAMILTON COLUMN

Andrew's: "I'd love to win," said the Ulsterman, "so long as I don't have to appear on 'Wogan'."

What we did have recently was the inevitable appearance of Paul Gascoigne. I felt sorry for the lad. Here is a sportsman possessing undeniable talent, but one who unintentionally became a tabloid hero when

he shed those genuine tears during the semi-final of the World Cup. Overnight he became every mother's son, a fact which was not lost in the editorial chambers of the popular press and within the production powerhouse which drives 'Wogan' to even greater depths of banality.

'Gazza' duly appeared and Wogan rounded off the chat by urging Gascoigne to make as much money as he could out of football. Doubtless this pleased the accountant and the lawyer who represent the soccer star.

Recently, the lawyer wrote to a journalist, challenging the writer's contention that George Best was a superior talent. I don't know much about football and I may be biased towards one of the greatest players that ever set foot on British turf, but it strikes me that, in this day and age of sporting hype, it is easy to lose your sense of perspective.

Confused priorities have also been evident recently within the world of Formula One. I refer, of course, to the celebrated case of the multi-contracted Jean Alesi, a driver who, at the time of writing, has competed in as many as 20 Grands Prix.

Alesi took it upon himself to sign bits of paper with Williams and Ferrari in the full knowledge that R.K. Tyrrell Esq. would need to have the final say in the Frenchman's plans for 1991. And R.K. Tyrrell being the man he is, there would be about as much chance of Alesi obtaining an easy exit from Ockham as there would be of Arthur Scargill ever admitting he made a tactical error.



Italian flair: reflecting on Monza's new press centre

error. To be fair to Frank Williams, however, it should be said that his negotiations had been conducted on the strict understanding that Alesi received Tyrrell's official blessing over the terms of his depart.

But I don't know who advised Alesi - by this time, the matter appeared to have gone beyond the sensible and persuasive powers of Eddie Jordan, Alesi's mentor, a man who, if the *Sunday Times* is to be believed, is due to make around £500,000 when Alesi moves on from Tyrrell - but it seems that the Frenchman's values had jumped a gear or two at a time when he really ought to have been refining his skills at the wheel of a racing car.

No one questions the raw ability that lies beneath an increasingly arrogant exterior but, when Alesi threw it all away with a stupid error during the race at Monza, it was clear that we were witnessing the perils of a driver becoming an ethereal legend before he had actually become a legendary driver.

Contracts have lost much of their meaning since Alain Prost pushed off early to join Renault in 1981, leaving the firm's lawyers to deal with an irate Teddy Mayer and the one year which remained on Prost's agreement with McLaren.

Prost argued that there was no point in forcing a driver to stay in an environment with which he was far from happy. It's difficult to find fault

with that; indeed, it is difficult for the team to enforce the contract under those circumstances. But such a bland dismissal of business ethics leaves the door open for the hard-nosed unpleasantness which now seems to pervade sporting life.

It is evident in boxing and it causes grief within football as players demand transfers against the better judgement of the management. Of

"That's the nice thing about Monza; it provides the ideal diversion from the urgency of the 90's."

course, the transfer method is infinitely more acceptable than the original system which bound a soccer player to his club for life. When George Eastham, the former England forward, successfully brought a restraint of trade action against the Football League, he brought a new freedom for the players. But it also laid the foundations for a system which has since become subject to serious abuse.

Contracts? They don't mean a thing. The problem is, though, that if competitors feel it is unnecessary to discharge their contractual obligations, then the sport they represent

descends into a battlefield of words which makes the game itself seem almost irrelevant.

By the time Monza had arrived, many people in the paddock were heartily sick and tired of the prevarication and political mumbo-jumbo surrounding Alesi. By that stage, I couldn't have given a toss that he had been to see Williams on such-and-such a date, but had spoken to Ferrari behind the bicycle sheds the week before.

In any case, a story you hear one day will be contradicted the next and, when the likes of Frank Williams says he is not talking to Ayrton Senna about a contract when you know he is, then it is time to simply enjoy what is happening out on the track and wait until the arrival of the definitive press release.

Frank Williams finally came clean when he called an impromptu press conference on the day before practice started at Monza. Unfortunately, because of this additional piece of questionable management by Frank, I missed hearing what he had to say. I was in Mario Acquatì's book shop at the time, and I can recommend no better panacea for overexposure to the self-important crap which motivates the Grand Prix paddocks during the silly season.

In Mario's shop, you can spend half an hour wallowing in the past, when life probably wasn't any better than it is today, but at least it seems



(Ayrton Senna Paddock)

that way. That's the nice thing about Monza; it provides the ideal diversion from the urgency of the Nineties.

On the first day, I had a leisurely lunch in the paddock restaurant with Eoin Young and John Watson. Eating out is always fun in Italy; it seems to be cause for a minor celebration and the quality of food usually explains why. The place always buzzes and, even though the Monza restaurant lacks the memorabilia you might expect, it has remained unchanged all these years - from the shrug of hopelessness by the man at the door when you ask for a table, to the ageing waiter who forgets your main course and adds to the conviction that, in his day, he must have served Farina and Ascari. Fortunately, there was no hurry or, at least, nothing that a touch of the grape couldn't cure.

Suitably fortified, we set off to explore the new pits, with the press centre above. In true Italian style, the building work had been executed with flair, the press facilities leaving us wanting for nothing. Except, perhaps, the arguing and melodrama which had become a part of arriving at the old press office and attempting to prise a suitable pass from the man at the desk.

I can recall one such occasion when my credentials were, to put it mildly, dubious. This was in the days when you had to apply to each and every race and the issuing of passes was at the whim of the local official. In this instance, having finished my 9.5 job in London on a Friday afternoon, I had arrived late and the man, his arguing done for the weekend, was in a relaxed mood.

No, he said simply, I've no more passes. Is finished. I explained that I had come a long way, that I represented a magazine I had never heard of, never mind him. I had no proper



The Wogan of the paddock? Alesi in press conference mode

credentials, except for copies of one or two articles of mine which had been published. He didn't seem to want to recognise the house magazine for Champion Spark Plugs, or a report from Lydden Hill in 'Autosport'. No, he reiterated, is impossible.

So, I put my paperwork away, looked at him, smiled, and put hands together in the time-honoured Latin way. He shrugged again, gave me a big speech in Italian, the palms of his hands to the fore. When he had finished, I nodded. What could I say? I hadn't understood a word of it. Except I guessed it meant I wasn't getting a pass.

Having nowhere else to go, I stood my ground. He became exasperated in a theatrical way and addressed the wall, the ceiling and the floor in the manner of a true thespian.

Then he opened a drawer. Inside were 30 passes. Maybe more. But I only wanted one. As he handed it to me, I made it clear that I felt I had really lost this argument. In the same way, he was making out that this had been a real pain when, in fact, it was

plain to see that he had enjoyed every minute of it. But I had my pass. A wonderful place, Italy. Provided they are on your side.

Of course, the passport to acceptance is to be a Grand Prix driver. Or, at least, one who is not seen as a direct threat to the Ferrari drivers. Prost, the man they tried to stone when he dared challenge Arnoux's Ferrari in 1983, is now well-received. But the applause is respectful. The adulation, this year anyway, was reserved for 'Leone Nigel' and he gave them everything bar a victory. Had he managed to finish first, that win would have lived with Nigel forever, a privilege granted to very few.

Clay Regazzoni knows all about that and this year's race marked the 20th anniversary of his win the day after Jochen Rindt's death had filled the place with sorrow. Clay was there this year, sitting high in the press box, watching the current stars performing before their fickle public.

I wondered what he must have made of the antics surrounding Jean Alesi. Certainly, Clay would have approved wholeheartedly of Alesi's exciting style. But the politics surely must have puzzled him.

In 1979, Clay drove for Williams and gave Frank his very first Grand Prix victory at Silverstone. At the end of the year, Frank tactfully explained that they were looking to replace Clay. But, if the negotiations did not work out and Clay was to stay, how much money would he want?

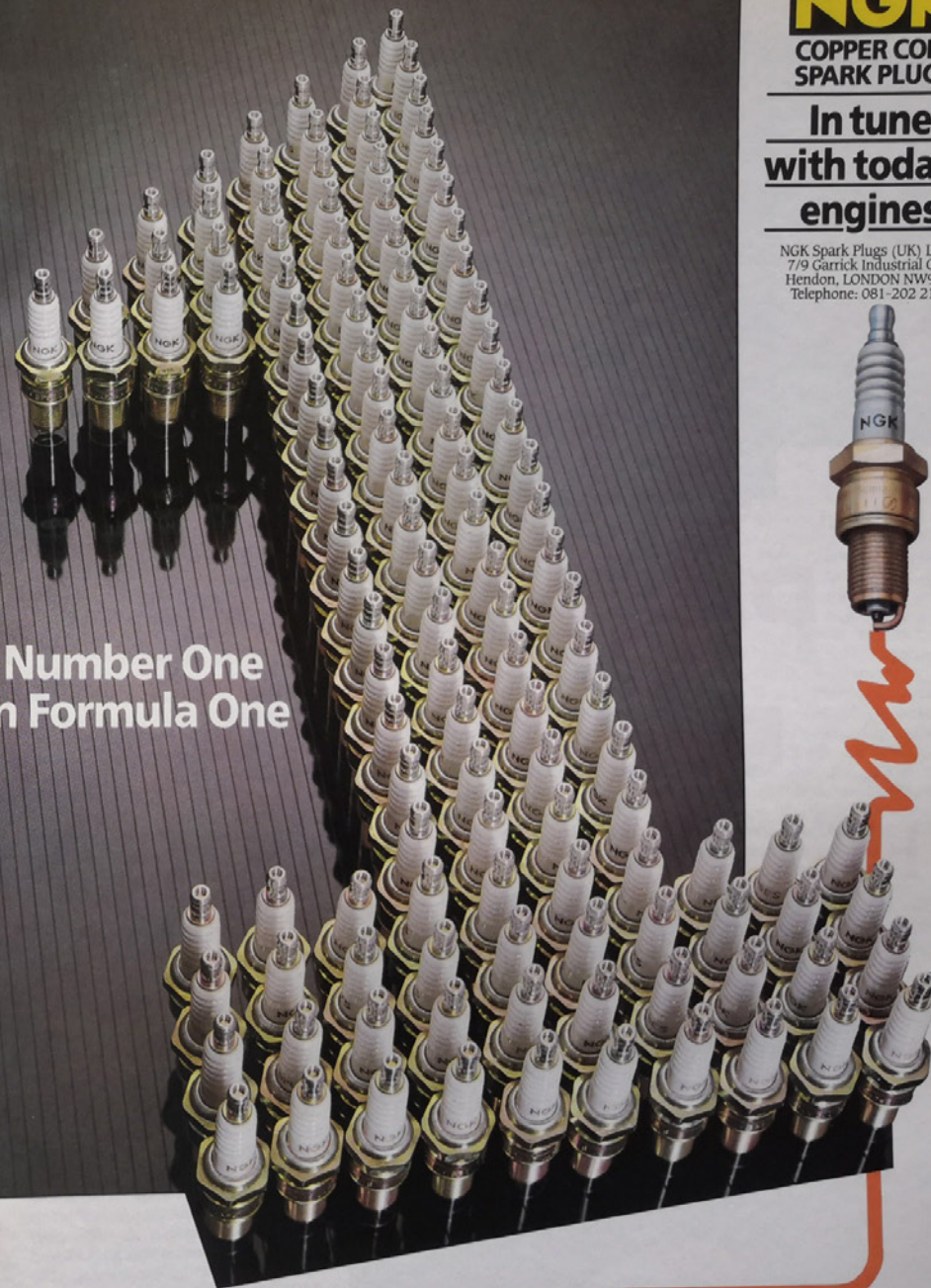
Straightaway, Regazzoni replied: "How much you pay me this year, Frank, I can't remember?" And neither he could. Clearly, a true sportsman and a gentleman. But he would never get on 'Wogan' with an attitude like that.

Mario's Monza shop: a step back from current values...



(LAT)

Number One in Formula One



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1990 FORMULA ONE GRAND PRIX CHAMPIONSHIP RACE No. THIRTEEN



PORTUGAL

SEPTEMBER 23 1990

FERRARI doesn't deserve to win this championship because there is no-one in the team with the authority to give direction and make the strategy required to compete with McLaren.

'McLaren is united and well structured and Gerhard Berger does the maximum to help Senna to be World Champion.'

He may not quite come flat out and say exactly what he feels — that team-mate Nigel Mansell screwed his chances of the title in Portugal — but you can never say that Alain Prost minces his words.

He wasn't complaining that he had finished third behind the victorious Mansell and champion-elect Senna, nor suggesting that Nigel should somehow have slowed the pace to allow him to catch and pass them both and thus keep his title hopes alive. There had, however, been great speculation after Mansell had taken the pole and Prost had joined him for the first all-Ferrari front row since

David Tremayne

Silverstone 1988. Would Nigel help his team-mate if the situation arose? Certainly, at the press conference at Silverstone in which he had first announced his intention to retire, he had said: 'I intend to carry on for the rest of the year, and I'd like to win some races. But I will also do everything I can to help Alain win the championship.' In Estoril on the Saturday, this had become: 'I drive for Ferrari and I will be trying to win for Ferrari and myself.'

Was he also planning to make a point, not only to the world in general but to Prost in particular, that he can beat the Frenchman despite all the frustrations of his season?

No, Alain wasn't asking for an easy ride. Far from it, he had been expecting a dogfight at Estoril and had planned accordingly. He is nobody's fool, Mr Prost. At Spa and Monza he had plenty of time sitting behind Gerhard Berger's McLaren,

and then when chasing Senna's, to ponder the problem. The McLaren-Hondas were simply quicker off the line. He pondered it a lot, and then invested two solid days of trial and error testing at Fiorano the Monday and Tuesday before the race. The idea was to develop the electronics of the F1/90's now reliable electro-hydraulic transmission, to come up with a long first and a short second gear which would, in effect, behave almost like a continuously variable set-up. It wasn't just a matter of the Honda RA100E possessing superior bottom-end torque, he reasoned. Ferrari simply wasn't making the most of what it had.

After the race we still didn't know whether the development effort worked. Sure, we'd all seen how effective the chassis was as it kicked the McLarens in qualifying. The MP4/5Bs were quick on Friday, but where Senna and Berger found only a hundredth apiece on their first Saturday runs, the Ferrari drivers improved by a second. Ultimately, even a banzai lap by Ayrton was

insufficient to edge the red cars off the front row.

What should have happened then was that Prost and Mansell worked together off the line to keep the McLarens at bay. Had they done so, they would have walked the race, which would have been a straightforward fight between the Englishman and the Frenchman. But they didn't work together. I've seen a lot of racing starts, but I've never seen anything like Estoril. The moment the lights went green, Mansell's car was moving hard to the right, squeezing over on Prost even worse than Berger had in the first Belgian restart. Prost had to jink to his right to avoid contact, and instead scraped his Goodyear Cs up against the pit wall. After his

It was one of the worst — the worst — starts I've ever made

1988 incident there with Senna — another 'team-mate' — he's probably getting a little tired of it.

'I had full throttle and I nearly spun the car', said Mansell. 'It was one of the worst — the worst — starts I've ever made. I got too much wheelspin and that just happened to be the way the car was pointing. I apologised to Alain afterwards.'

Observers wanted to know why there weren't clouds of tyre smoke with his wheelspin, and why the Ferrari still had sufficient momentum to be in third place into the first corner, into which Senna and Berger lunged first and second, probably dying of laughter. All that qualifying effort by Ferrari, thrown away.

Prost wasn't laughing. As events proved, he had the best race set-up, as he so often does, and felt he would have won. A win would have done wonders for his championship aspirations.

'My car was for sure the best today. Even after my long pit stop — the left rear wheel was tricky — I could close back on the leaders, and the grip on my second set of tyres was fantastic, especially in the corner leading on to the straight. Even though I lost sixth gear 10 laps after my stop, the car felt brilliant.'

'But for me it was over at the start. What Nigel did, decided the race...'

When Alex Caffi and Aguri Suzuki collided on their 59th lap, during



Worst start, best finish: Mansell matches Moss.

an increasingly heated battle for ninth place, the Italian's situation was serious enough to warrant stoppage of the race, and at the 61-lap mark when the results were set, Prost was still chasing Senna.

The Brazilian had driven a canny race. Just as in 1989 he knew that the advantage lay with the Ferraris, and when Mansell hunted him down and came at him very strongly into turn one on the 50th lap, he conceded the position. It was an indication of how he has matured in the past 12 months. A year ago, in the very same situation, he had closed the door and both had gone off. This time, he explained: 'I was fighting for the Championship, but

I had more points this time and I didn't have to win. I didn't have to compromise myself, so second was fine for me. He was faster on to the straight than me, so I knew he would come down the inside. As you remember we had a bit of a moment there last year. I think this time I was a bit ahead but I couldn't see him, so I didn't turn in.'

The two thus kept their cars and, judging by their rostrum embrace, their new-found friendship intact. Had they made some sort of pact as they left the circuit together on Saturday night? It seemed unlikely, beyond two chargers taking the sensible decision not to aggravate one another.

Senna — laughing all the way to the title?





Off the pace, out of the race: bad weekend for Williams.

There was an occasion, when Nigel was held up lapping Martini, that Ayrton had a brief look at what would have been a dramatic outbraking attempt into the left-hand hairpin, but both men knew the Ferrari was superior. 'It was safer not to try,' said Senna afterwards, a man with the warm glow that comes from knowing a Championship is almost in the bag.

For Prost there was no such feeling. He hid his emotions well as Mansell interrupted Senna in the press conference with the comment: 'He (Senna) is a great driver. There's a very good feeling between us now.'

Prost fires broadside at Ferrari

It was only later, to his French radio friends, that Prost confided his real thoughts, he fired his broadside at Ferrari and, effectively, told Fiat that Cesari Fiorio has to go, or else he himself will consider retirement a year earlier than planned.

This time, there was no Berger to look bemused on the rostrum, the Austrian charging hard at one stage before dropping back a little with a gearbox problem. Another 1990

race, another failure to win. Perhaps one day we shall learn the truth of his season, that he still doesn't fit the McLaren and therefore hasn't been running at 100%. Or that he has run his hardest, and simply isn't fast enough. What he has been, though, is the perfect team-mate for Ayrton, and if the Brazilian went on to win the title, said the feeling in Portugal, he would owe something to Gerhard.

As has been the case since Hungary, neither Williams nor Benetton

could quite get on terms with the two top teams. Piquet benefited from the start nonsense to run ahead of Prost for the first 12 laps, but once by the Ferrari driver left him for dead. Equally, neither of the Williamses really threatened Nelson, and themselves were hounded by the slow-starting Nannini. Unlike Piquet, Sandro had gone for harder Bs and was planning a non-stop run, and when Nelson came in for new Cs on lap 26 Sandro moved ahead, now fourth

Piquet won the private Benetton race.



as Prost had also had his delayed stop. Alain overtook quickly, but Sandro looked set for two points until deciding he needed fresh tyres after all, on lap 52, whereupon Piquet resumed the position. Sandro was coming back at him strongly when the red flags came out.

Behind them, Patrese survived two stops for tyres and a very gravelly moment in the turn one sandtrap, over which he was able to drive having missed his braking and slithered down the escape road. The FW13B was a handful throughout the race, understeering in and oversteering out of corners, but Riccardo blamed himself more than he did the car for his failure to garner a point.

Boutsen, still the limbo man as he awaited some decision from Williams, was passed by the speedy Alesi initially, before repassing and then catching Riccardo. His efforts were negated on lap 26 though, when his gear selectors again played up and he downshifted from sixth 'into goodness knows what!' This time, Renault's V10 didn't withstand the abuse, and he parked just past the first corner.

For a while, Alesi had been part of the mighty scrap for eighth between the impressive Suzuki (on Bs), and Caffi and Capelli (hoping to run non-stop on Cs) having pitted for fresh Pirellis, but he worked through and was well clear of the incident which led to the

stoppage. Capelli's run ended with a blown engine on lap 52, the Leyton House porpoising badly in the Arrows' wake, and both cars and their drivers' helmet visors smeared with the oil from Pirro's Dallara, which they had chased nose to tail for the first 29 laps. 'It was so bad, the only place I could see to pass Alex was on the straight,' said Ivan, 'and I didn't have the speed to do it there.'

On their 59th lap, Suzuki was moving inside Caffi when the Bressian moved over on him. The Larrousse Lola lost its left front wheel, and Alex was pushed into the barriers, where he sustained a suspected cracked bone in his left ankle. It took time to get him out of the car, so wisely the red flags were deployed.

Thus Mansell sped to his first victory of the season, and a 16th that brought him equality in the win stakes with Stirling Moss. But it could so nearly have gone wrong. On lap 53, while Alliot was embroiled in a furious battle with Martini and team-mate Larini for 10th, Philippe moved across on the Ferrari on the exit to turn one. The previous day he had threatened to throw a pit jack at de Cesaris' Dallara after the Italian had failed to see him coming; now the boot was on the other foot. Mansell couldn't avoid hitting him with his front left, and the Ligier went backwards into the wall at speed. Alliot, crestfallen,

was able to walk home to a rapturous welcome from his team, having brought his chassis score to two for the weekend.

If Guy was ranting back at Magny Cours, enemy Gerard Larrousse had little to cheer, with Suzuki's accident and Eric Bernard bogging

It was a pointless exercise again for Lotus

down at the start before retiring with similar gearbox failure to that which claimed both Brabhams. It was also a pointless exercise again for Lotus, Sunday morning warm-up promise evaporating with throttle slide problems for Warwick and a duff alternator for Donnelly. Dalmas lasted only three laps before breaking a driveshaft, while de Cesaris raised a dust cloud on lap one with a spin induced by a sticking throttle.

In the post-race debate the talk was all of Prost v. Fiorio, and Mansell's dealings with Williams. Of his extraordinary startline manoeuvre and the likelihood of his reversing his retirement decision. Yet that morning his talks with Williams had again stalled; perhaps, just perhaps, he truly had wanted to win the Portuguese GP as a gesture to the world, and a retirement present to himself.

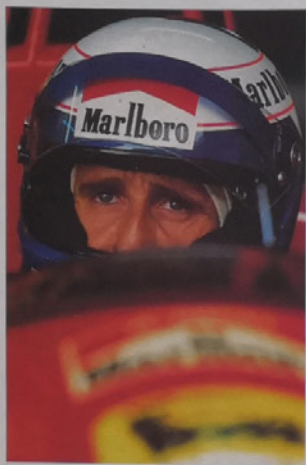
Caffi charging — but his accident stopped everyone's race.



1990 FORMULA ONE GRAND
PRIX CHAMPIONSHIP
RACE NO. THIRTEEN

PORTUGAL

FROM THE COCKPIT



Alain Prost (Pascal Bourdieu)

Alain Prost came to Portugal, where he had won three times before, determined to triumph for Ferrari and keep alive his challenge for the Drivers' World Championship. But it did not work out that way for the Frenchman. Timothy Collings reports.



Alain Prost (Pascal Bourdieu)

"THIS has always been a circuit I like, but this weekend I did not have the luck I needed to win. Now I do not think I can win the Championship. It is over for me and I do not want to think about it any more. The team and I have done a lot of hard work, but it has not worked out. In the end, I think I lost the race at the start.

"On Friday, I just could not get the best out of my qualifying tyres for a full lap, but lost the best time by only three-tenths of a second. It was a good demonstration that Ferrari are very close to McLaren now. The car was fantastic and Ayrton was only that little bit quicker. I could not improve my time on my second run because Nakajima had a spin and left a lot of earth on the track. But I finished that day feeling confident I could really fight for pole on Saturday.

"We had made some modifications to the car after studying everything from Monza and the telemetrics and felt good about it. We looked at some more modifications for the engine, but they will not be used until Jerez, I think. The big work we did was on starting and the gear ratios. We spent two days last week working hard on this to improve our starts.

"On Saturday, again I did my best lap on my first set of tyres. I was quite disappointed again because we did so much work and I was only able to get the second best time. I would much have preferred to be on pole position. But it is still almost perfect to have two Ferraris starting on the front row.

"On Saturday, we were really completing all the work we had done months before. I knew we had to make the most of starting in front of the two McLarens.

"On tactics for the race, I knew that if I wanted to be in front and to lead the race I would have to be in front at the first corner. I did not ask Cesare Fiorio about any tactics for

the race and I expect Nigel to drive a normal race. If I was in his place I would want to win the last four races too.

"I hoped very much that all the work we had done between Monza and here would pay off. We worked so hard at Maranello, making all the modifications on gears. From our studies, we knew we had to do something about the changes from first to second and from second to third.

"We have improved a great deal to be sure this year, but that and hard work are not anything without a bit of luck sometimes."

The race itself was also disappointing for Alain as, after seeing Mansell top the Sunday morning warm-up, he had high hopes of making a good start to lay the foundations for victory.

"I think the start decided the race," he said. "My car was, for sure, the best at the end of the race. I had some problems of course, but after I had overtaken Gerhard the car was fantastic. In the first part, I

"All I want to do now is to finish the season."

had some trouble catching the leaders and there was nothing much I could do. But then I caught them and I led for one lap. Then I had a very long pit stop. I was unlucky when I came out too because I was just behind Nannini and Berger and it would have been much easier for me if I had not been. Then after about ten laps I lost sixth gear. I knew I could not win then, but the car was really fantastic, especially in the corner before the pits and the straight. I really feel very disappointed. I don't want to think about the Championship any more because I have done a lot of work and nothing has gone right at all. All I want to do now is to finish the season."

AT THE TRACKSIDE

1990 FORMULA ONE GRAND
PRIX CHAMPIONSHIP
RACE NO. THIRTEEN

PORTUGAL

Williams denies chasing Mansell

Frank Williams flatly denied in Portugal that he had re-started his bid to sign Nigel Mansell. "It is rubbish to say that I have had further talks with Nigel Mansell," he told journalists. But speculation has it otherwise because Mansell is the only remaining "top line" driver still uncommitted for 1991. Renault, so the story goes, are willing to foot the bill for the Englishman's services.

What Williams did confirm was that he would make an announcement on his 1991 driver line-up the evening of the Spanish Grand Prix. But, enigmatic as ever, Williams clapped his hands together, grinned and added: "I promised to tell no more than six fibs to the British press in 24 hours." What are we to make of that?

Satoru Nakajima misses Portugal race

Satoru Nakajima missed the final qualifying session in Portugal on the advice of FISA Medical Delegate, Professor Sidney Watkins, because of a bad attack of 'flu and a day later decided not to race after he discovered his sense of balance had been so badly affected by the virus that he damaged a Tyrrell monocoque in an accident on race morning.

Renault to supply Ligier from 1992

Renault announced they will supply engines to Ligier from the start of the 1992 season. In a statement, Renault said "this commitment highlights Renault Sport's firm resolve to play an active part in making the French team one of the best in Formula One again."

Martini re-signs for Minardi

On the evening before qualifying began in Estoril, Pierluigi Martini re-signed for Giancarlo Minardi's team, due to run with Ferrari V12 power in 1991. A statement said agreement was reached "very

rapidly and with mutual satisfaction". 1991 will be Martini's fourth year with Minardi.

Nannini - why I turned down Ferrari

Alessandro Nannini, under pressure from the Italian media, explained why he had rejected Ferrari's bid for his services next year and sparked off criticism of the Maranello-based team's cavalier attitude towards contracts. The Benetton driver, who was made the offer by Ferrari at Monza, said he had wanted a two-year contract, but



Alex

had only been offered one year with an option on a second. He said he was verbally promised a letter offering a two-year deal. On the advice of his lawyers he requested further serious discussions, but when these materialised Ferrari restricted themselves to talk only about the initial offer of one year and an option. Clearly, something sinister had happened in the meantime, leaving Nannini and Benetton embarrassed and angry at the whole sad episode.

Musical chairs starts

Minardi announced on the first day of qualifying in Portugal (September 21) that they had re-signed Pierluigi Martini for a fourth consecutive season. It is a one-year deal and Ferrari test driver, Gianni Morbidelli is tipped as the man most likely to be his team-mate in the cars which will be powered by Ferrari engines in 1991.

Tyrrell announced in Estoril that

they had signed Italian Stefano Modena, 27, for 1991 with an option for 1992 to drive their Honda-powered car alongside Satoru Nakajima.

Alesi signs for Ferrari

The saga of Ferrari's bid to sign Jean Alesi finally came to an end before the Portuguese Grand Prix with a simultaneous statement from Tyrrell and Ferrari that he would be at Maranello in 1991. "We had a binding agreement with Jean for next year but ultimately if a driver's heart is not 100 per cent with the team we do not feel that he will perform to his full potential," said Tyrrell MD, Bob Tyrrell.

Alesi cost Ferrari dear. They had to buy him out of his Tyrrell contract, meet the penalty clause, and then pay Alesi's salary too. After that the team had to buy Williams out of the agreement Alesi had signed with them by 'donating' a Ferrari 641 to the Williams museum. Mansell, who was given one at the start of this year estimated the value of his at \$5 million!

Row over technical regulations

The FOCA teams met on September 20 in Portugal to discuss the proposed changes to the technical regulations put forward by FISA President, Jean-Marie Balestre, at Monza to improve safety and reduce cornering speeds. The teams have opposed most of the suggested changes for 1991 which include an entirely flat bottom and reduced wing sizes on the basis that a majority of the teams were in the final stages of design of next year's model. As a compromise FOCA has recommended to the Formula One Commission the banning of special fuels for 1991. They want the flat bottom ruling to come into effect from the year after.

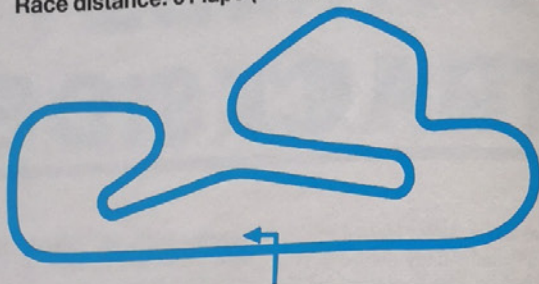
Compiled by Timothy Collings and Byron Young.

1990 FORMULA ONE GRAND PRIX RACE No. THIRTEEN

ESTORIL PORTUGAL

23 SEPTEMBER 1990

Circuit length: 2.703 miles/4.350 km
Race distance: 61 laps (164.885 miles/265.350 km)



DRIVERS' WORLD CHAMPIONSHIP

Pos.	Driver	Total
1	Ayrton Senna	78
2	Alain Prost	60
3	Gerhard Berger	40
4	Thierry Boutsen	27
5	Nelson Piquet	26
6	Nigel Mansell	25
7	Alessandro Nannini	17
	Riccardo Patrese	17
9	Jean Alesi	13
10	Ivan Capelli	6
11	Eric Bernard	5
12	Derek Warwick	3
13	Alex Caffi	2
	Stefano Modena	2
	Satoru Nakajima	2
16	Mauricio Gugelmin	1
	Aguri Suzuki	1

CONSTRUCTORS' WORLD CHAMPIONSHIP

Pos.	Team	Total
1	McLaren	118
2	Ferrari	85
3	Williams	44
4	Benetton	43
5	Tyrrell	15
6	Leyton House	7
7	Larrousse	6
8	Lotus	3
9	Arrows	2
	Brabham	2

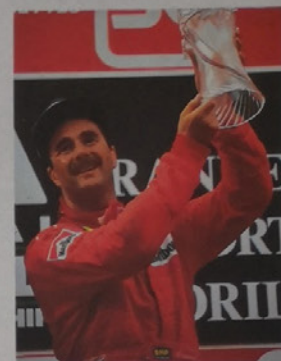


OFFICIAL STARTING GRID

Nigel Mansell Ferrari 641	1.13.557	2	1	Alain Prost Ferrari 641	1.13.595
Ayrton Senna McLaren-Honda MP4/5	1.13.601	27	28	Gerhard Berger McLaren-Honda MP4/5	1.14.292
Riccardo Patrese Williams-Renault FW13B	1.14.723	6	20	Nelson Piquet Benetton-Ford B190	1.14.728
Thierry Boutsen Williams-Renault FW13B	1.14.934	5	4	Jean Alesi Tyrrell-Ford 019	1.15.122
Alessandro Nannini Benetton-Ford B190	1.15.411	19	29	Eric Bernard Larrousse-Lamborghini 90	1.15.673
Aguri Suzuki Larrousse-Lamborghini 90	1.16.012	30	16	Ivan Capelli Leyton House-Judd CG901	1.16.284
Emanuele Pirro Dallara-Ford BMS190	1.16.290	21	15	Mauricio Gugelmin Leyton House-Judd CG901	1.16.296
Martin Donnelly Lotus-Lamborghini 102	1.16.762	12	23	Pierluigi Martini Minardi-Ford M190	1.16.795
Alex Caffi Arrows-Ford A11	1.16.946	10	22	Andrea de Cesaris Dallara-Ford BMS190	1.17.066
Michele Alboreto Arrows-Ford A11	1.17.081	9	3	Satoru Nakajima Tyrrell-Ford 019	1.17.097
Philippe Alliot Ligier-Ford JS33B	1.17.120	26	11	Derek Warwick Lotus-Lamborghini 102	1.17.259
Nicola Larini Ligier-Ford JS33B	1.17.269	25	8	Stefano Modena Brabham-Judd BT59	1.17.341
Yannick Dalmas AGS-Ford JH24	1.17.621	18	7	David Brabham Brabham-Judd BT59	1.17.715

RACE CLASSIFICATION

Pos.	Driver	No.	Nat.	Car	Laps	Time/Retirement
1	N. Mansell	2	GB	Ferrari (G)	61	1:22.11.014
2	A. Senna	27	Bra	McLaren-Honda (G)	61	1:22.13.822
3	A. Prost	1	Fra	Ferrari (G)	61	1:22.15.203
4	G. Berger	28	Aut	McLaren-Honda (G)	61	1:22.16.910
5	N. Piquet	20	Bra	Benetton-Ford (G)	61	1:23.08.432
6	A. Nannini	19	Ita	Benetton-Ford (G)	61	1:23.09.263
7	R. Patrese	6	Ita	Williams-Renault (G)	60	
8	J. Alesi	4	Fra	Tyrrell-Ford (P)	60	
9	M. Alboreto	9	Ita	Arrows-Ford (G)	60	
10	N. Larini	25	Ita	Ligier-Ford (G)	59	
11	P. Martini	23	Ita	Minardi-Ford (P)	59	
12	M. Gugelmin	15	Bra	Leyton House-Judd (G)	59	
13	A. Caffi	10	Ita	Arrows-Ford (G)	58	
14	A. Suzuki	30	Jap	Larrousse-Lamborghini (G)	58	
15	E. Pirro	21	Ita	Dallara-Ford (P)	58	
R	P. Alliot	26	Fra	Ligier-Ford (G)	52	Accident
R	D. Brabham	7	Aus	Brabham-Judd (P)	52	Gearbox
R	I. Capelli	16	Ita	Leyton House-Judd (G)	51	Engine
R	T. Boutsen	5	Bel	Williams-Renault (G)	30	Gearbox
R	E. Bernard	29	Fra	Larrousse-Lamborghini (G)	24	Gearbox
R	S. Modena	8	Ita	Brabham-Judd (P)	21	Gearbox
R	M. Donnelly	12	GB	Lotus-Lamborghini (G)	14	Alternator
R	D. Warwick	11	GB	Lotus-Lamborghini (G)	5	Throttle sticking
R	Y. Dalmas	18	Fra	AGS-Ford (G)	3	Driveshaft
R	A. de Cesaris	22	Ita	Dallara-Ford (P)	0	Accident
DNS	S. Nakajima	3	Jap	Tyrrell-Ford (P)	0	Ill



Retirement present?

Fastest Lap: R. Patrese (6) Lap 56
1:18.306, 124.268 mph/199.985 km/h
(G) = Goodyear tyres, (P) = Pirelli tyres.

FASTEST LAPS

2. 1:18.577	10. 1:21.843
27. 1:18.936	30. 1:20.349
1. 1:18.996	21. 1:22.231
28. 1:18.438	26. 1:20.914
20. 1:19.713	7. 1:22.275
19. 1:18.355	16. 1:21.623
6. 1:18.306	5. 1:20.575
4. 1:20.916	29. 1:22.434
9. 1:20.792	8. 1:23.232
25. 1:20.958	12. 1:22.625
23. 1:21.186	11. 1:23.510
15. 1:21.894	18. 1:24.879

- Mansell's 16th victory, equalling Stirling Moss's record as the most successful English driver.
- Mansell's first victory of the season.
- First all-Ferrari front row since British GP 1988.
- Next round: Spanish GP, Jerez, September 30th.

NON QUALIFIERS

No.	Name	Car	Time
14	O. Grouillard	Osella-Ford	1:17.775
24	P. Barilla	Minardi-Ford	1:18.280
17	G. Tarquini	AGS-Ford	1:18.815
31	B. Gachot	Coloni-Ford	1:20.516

● Grouillard complained of lack of power while Osella head Gabriele Rumi attributed failure to the lack of Pirelli's latest qualifying tyre.
● Tarquini — handling problem.
● Gachot — lack of power.

PREQUALIFYING

No.	Name	Car	Time
14	O. Grouillard	Osella-Ford	1:19.394
18	Y. Dalmas	AGS-Ford	1:19.885
31	B. Gachot	Coloni-Ford	1:20.000
17	G. Tarquini	AGS-Ford	1:20.942
33	R. Moreno	EuroBrun-Judd	1:21.188
34	C. Langes	EuroBrun-Judd	1:23.447
39	B. Giacomelli	Life	—

● Both Moreno and Langes complained of lack of power.
● The Life car managed just one lap which was not even recorded.





1990 FORMULA ONE GRAND PRIX CHAMPIONSHIP RACE No. FOURTEEN



SPAIN

SEPTEMBER 30 1990

A week earlier Alain Prost had been conceding the world title to Ayrton Senna, the deficit a seemingly impossible 18 points with three races to run. Impossible? Well, Senna hadn't had a retirement through pukka mechanical failure all year, just that stone that machined out his wheel in Imola, and a puncture in Mexico. He was looking good.

Well, Spain put an end to that enviable situation. The Brazilian dropped out with overheating, and suddenly the victorious Prost found himself back in the running.

It had been an odd week for the Frenchman, after his blazing criticism of team manager Cesare Fiorio and his comments about the start team-mate Nigel Mansell had made in Portugal. "If he did it deliberately, then I don't need to make any comment," said Alain to Italian and French journalists mid-week. "And if it wasn't deliberate, he shouldn't be in an F1 car."

Strong stuff indeed, that Mansell simmering to the boiling qualifying.

David Tremayne

On the Thursday, Ferrari boss Piero Fusaro had visited the garage in the Jerez paddock to administer a "closed doors" pep talk that ended in cheers from within. That meshed in well with Fiat chief Gianni Agnelli's personal vote of confidence in Prost. What Fiorio thought remained masked behind the distinctive sunglasses he wears. What was that new nickname I heard to replace "Hollywood"? Ah yes, "Il Salvatore", "The Welder".

Qualifying, however, had been far from all about the duel between McLaren and Ferrari. It began that way, but at 1.52 on Friday afternoon it became a story of human values, of human life.

Martin Donnelly is one of the most popular drivers in racing. At that time his Lotus failed to negotiate the almost flat in sixth right-hand corner that follows the two third-hand 90 rights on the back leg of the twisty Spanish track. One corner

later, at Ferrari, he would have had sufficient run-off area in which to try and do something. There, he had nothing. No run-off, just a strip of guardrail. The Lotus hit it at an angle around 40 degrees, at a speed around 140 mph. It exploded into fragments, and as the barrier sprang backwards and then regained its original shape, it acted like a catapult. Debris was thrown into the road and, among it, went

It was a horrible accident, terrifying in its violence

Martin, part of his seat still attached to his back. The 102 was nothing but a shattered hulk, its front end no longer existent.

It was a horrible accident, terrifying in its violence, and those who saw it could see no way in which the likeable Briton could possibly have survived. He lay inert in the middle of the road for long minutes until help in the form of Dr Syd

Watkins arrived, and slowly began the awful task of transporting him to the medical centre.

Ayrton Senna walked down to the accident scene, and came away profoundly moved. Then the news filtered through, almost unbelievable in its hopefulness: Martin was alive. As he was stabilised before transfer to the Virgen del Rioco Hospital in Seville, with concussion and multiple fractures, qualifying resumed amid a paddock full of white faces.

Senna climbed into his McLaren and turned a lap faster than anyone else, then stalked straight into the McLaren truck. There he paused for long moments, analysing his feelings, winding down after a stupendous, perhaps cathartic effort, before he went off to the medical centre again. Donnelly had recognised him at the track side, and perhaps it had brought him hope.

The following day Senna wrapped up the pole and made his record 50th, and followed it with an emotional press conference. On raceday, it profited him well, even though Prost's Ferrari was clearly the faster car. "As long as I was behind him, I could have been two seconds a lap faster," said Alain, "and it wouldn't have made any



Not sitting quite so pretty now?

difference. On this circuit you just cannot overtake."

In fact, his best chance lay in the run up to the first corner, but Senna always had him covered there with the McLaren Honda's superior low-speed grunt. Prost thus knew a smart pit stop was the only other chance. Team-mate Mansell made his first and it worked well, and

Prost's on lap 25 was as slick. Senna made his a lap later, just as the two Ferraris were pounding past the pits in pursuit of temporary leader Piquet, alone in hoping to run non-stop on Goodyear's harder compound B rubber.

As Senna came barrelling out of the pit exit Prost was shaping up to go round the outside of Mansell, with the latter's co-operation. Prost got into turn one first, but then Senna pulled one of those excellent opportunist moves of his and grabbed third place from Mansell, diving up the inside of the Ferrari and obliging the Briton to give him room.

"I was looking to my right be-

"the first I saw of him was a blur of red and white on my inside!"

cause I wanted Alain to go by me on the straight and thus avoid getting delayed on the twisty bits," said Mansell. "I didn't see Ayrton coming out of the pits to my left and the first I saw of him was a blur of red and white on my inside!"

Once in the lead, Prost had it made, his second stop going just as smoothly as the first, his precision a

Wonder what Ken said about Alesi's latest mishap...



joy to watch. Senna, for all that the McLaren wasn't as good, had a lock on second, but further back the same sticking throttle problem that had dogged Mansell in Italy made getting on terms with the fleet Piquet very difficult. It was only when the Benetton developed a misfire that required a very long stop on lap 42 that Nigel got back into his stride, but there was no question of catching Senna. However, all was not well with the McLaren, as Ayrton felt it sliding around. On lap 52 he was in the pits again, fearing a puncture. He received a new set of Cs, but was informed that the right water radiator was leaking on the right rear tyre. Thereafter he knew he was on borrowed time as he resumed in sixth place. Two laps later it was over as the Honda overheated, and when he stopped just past the pits, and sat on the concrete wall totally oblivious to the danger of passing Mansell, Berger, Boutsen, Patrese, Piquet — initially, Sandro got a rhythm once his Benetton stopped understeering on a full fuel load. It began to lose its turn-in again near the end, as his second set of tyres lost their edge from following Mansell, the Williams and Berger too closely, but by then the opposition had eroded and he was home and dry.

Berger, like Piquet, began on harder Bs, holding up his immediate pursuers. The Austrian was in aggressive mode, triggering an altercation with fourth fastest Jean Alesi even on the green flag lap, and then punting him into Patrese at the start proper. The Tyrrell caught the Williams, which flew momentarily into the air. Riccardo was able to continue with bent suspension which upset his handling throughout, but after another shove from Gerhard Jean pirouetted into gravel bed retirement at the first corner on that opening lap, his left rear wheel rim embedded. He was far from amused.

Such is the way he treats his car, Berger received another set of Bs on his first stop, and only went to Cs on his second, by which time he was down to seventh behind the two Williamses. He disposed of the troubled Patrese easily enough, but an aggressive piece of driving in the final corner on lap 57, as he tried to muscle by Boutsen, proved his undoing. Thierry had been prepared to concede the place until he saw that he would have to go off himself, whereupon he fought back



Mansell, Senna, Nannini: always second-best on the day.



and turned the tables. As he carried on for fourth place, Gerhard ended his race in the gravel bed.

Such retirements left one championship point available for the minnows, and there was no shortage of competition for it. With Alesi sidelined early, Warwick was an early candidate as he clung to the leading group until it finally edged away by lap 20. His was a brilliant, abnormally brave drive in the face of Lotus fears that Donnelly's accident had been caused by front

suspension failure, and on Saturday his courage had shone through as he determined to drive. The team should really have withdrawn until it had accurately assessed the reason for the accident, but Derek carried on. "I was proud of myself," he revealed, "but also angry. It was a stupid thing to have done, really." Sadly, his bravery was not to be rewarded. He was up to sixth during the pit stops, but his own was appalling, and shortly after his second the loss of second gear



Derek Warwick: selfless and brave, above and beyond the call of duty.

finally wreaked havoc on the rest of his gearbox and he retired on lap 60.

Both Leyton Houses might have got that point, but after a charge from 18th on the opening lap to seventh by lap 50, Ivan Capelli succumbed to very painful cramps in his right leg. Gugelmin, the next candidate, lost his clutch and with it his chance, and it was finally Aguri Suzuki who snatched his second point to add to the one won at Silverstone for Larrousse.

Nicola Larini brought his evil handling Ligier home seventh, a result which delighted him despite the difficulty it entailed, while Yannick Dalmas brought his AGS home ninth ahead of Alboreto's sole Arrows and behind Gugelmin.

Plenty failed to make it. De Cesaris lost his engine after falling back with brake problems, as team-mate Emanuele Pirro was a first lap casualty in the first corner barge, and Olivier Grouillard suffered another wheel bearing failure, a problem that seems to dog Osella. Tarquini's engine blew after five

laps in the spare AGS, his race car shearing a driveshaft on the warm-up lap, and Eric Bernard had difficulty selecting fourth gear on down-changes as a prelude to total gearbox failure after 21 laps.

After Estoril Philippe Alliot needed a good result, but threw away a solid qualifying position with a spin when running in a point-potential 11th place. Pierluigi Martini had been his track companion, but after two tyre stops the little Italian spun into the first corner gravel trap after leaving the pits... because somebody had forgotten to tighten the left rear wheel nut. Nakajima spun out, while Dalmas punted off the unlucky Modena on lap six.

The Spanish GP outstayed its welcome as tired teams prepared to say goodbye to Europe. It was a pretty good race at times, and it brought Prost a very well deserved triumph, but Donnelly's accident cast a pall over it, and reposed some serious questions not only about the general safety of F1 cars,

but also about the wisdom of allowing tracks to have such fast corners where no run-off areas exist. Martin survived, but it was nothing short of a miracle. Somebody in sufficient authority would do well to take that aboard, and appreciate that circuit safety also needs a rethink.

Two more as team-mates: will Mansell help Prost keep his title?



1990 FORMULA ONE GRAND
PRIX CHAMPIONSHIP
RACE NO. FOURTEEN

SPAIN

FROM THE COCKPIT



Jerez is a very tough circuit physically. One of the toughest on the calendar for the drivers. It is a tough place to race and the cars are always very close and usually here the best chassis wins, not the best engine.

"Of course, the weekend was overshadowed by Donnelly's accident which I think was not so much a problem just of the circuit, not exactly. The cars today are getting extremely, extremely quick on the corners and many, many circuits if you have a failure in the middle of the corner with the speed you are going the accident is really going to be severe. There is very little run-off area there where Donnelly had his accident, but there is also very little run-off in Monaco, Portugal and other places. There is always a big problem if you brake.

"We had good progress on the Friday to the Saturday and the car felt very well set up. On Friday, I used the spare car because the

After a series of consistent results, Nelson Piquet came to Spain looking for another good showing in the points to maintain Benetton's challenge for the Constructors' Championship. For him, and everyone at the race, it turned out to be a busy weekend. Timothy Collings reports.

set-up is different and I prefer it. The first set of qualifying tyres were very good for me, but I felt I had not really made the most of them. With the second set, I had more understeer than I would have liked, but otherwise it was a good lap and I was quite happy with it.

"On Saturday, I stayed with the spare car and went quicker than on Friday on my first set of qualifiers. There was a slight touch of oversteer with that set, but the second

set was very good and I went even quicker.

"It was a good time considering I came across traffic in the quick corner behind the paddock. If I had been able to find another tenth of a second, I would have moved up four places. Overall, though, we made good progress.

"But unluckily, in the race, we were caught up behind the Williams as we started behind them and they held us up for a long time. But the car was much quicker than the Williams and I got the right tyres and I could get away and do the whole race without stopping.

"That was what we wanted to do with the hard tyres and I wanted to go all the way without a stop. The only problem came in the race when I missed a gear and I got on a dirty part of the circuit and the car went straight and I went off on the grass. I was able to get back but I lost about five seconds when I was leading the race at the time.

"After that, the battery power came down and the car started to misfire and I came into the pits to change the battery and I went out again, but after five laps the battery was not working again and I had to retire. During those five laps, I had new tyres and I tried and did the fastest lap of the race up to that time.

"Overall, it has not been too bad. But this season had not been good all the way. Some of the races I have not had the right set-up and some of them I have not had the right set-up on full tanks, really bad, because I have had fuel leaking or something like that.

"With the power we have there is not much chance of us challenging for the championship. It is very difficult for us. We have about 80 hp less in qualifying and about 50 hp less in race condition. It is a lot if you want to be competitive for the championship.

"If Ford does not hurry up and make the V12 I don't think we can get near to Honda or the others."

AT THE TRACKSIDE

1990 FORMULA ONE GRAND
PRIX CHAMPIONSHIP
RACE NO. FOURTEEN

SPAIN

Donnelly accident dominates weekend

Donnelly's accident was the focal point of the weekend, if not the season. Twice-daily routine medical reports were a feature of paddock gossip and the Ulsterman's condition was on everyone's lips. Many observers found it incredible that it had taken Professor Sid Watkins more than three minutes to reach the scene of the accident and, reportedly, recover the driver's tongue and save him from the worst. It was suggested that the car carrying the life-saving chief medical officer of Formula One was too slow and badly positioned and there is little doubt that this issue will be discussed in much greater depth in future. Prof. Watkins, for his part, made it clear he was fully satisfied with the medical care provided for Donnelly who, once recovered, was soon moved on to the Santa Maria Rocio Hospital in Seville.

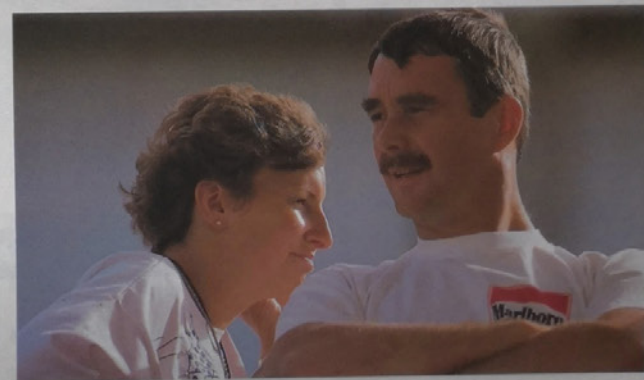
Senna grabs career 50th pole

Ayrton Senna secured his 50th pole in Jerez, a landmark which may remain unbeaten for many years even after his retirement. He admitted it meant a great deal to him and thanked everyone concerned for their help since his first pole in Portugal in 1985. The Brazilian also showed the compassionate side of his nature by admitting how upset he had been about Martin Donnelly's bad accident. "I went to the place where it happened," he said. "I wanted to see it for myself and I found it very hard to take. I had to have a private moment on my own to carry on."

Ferrari meeting ends feud

The Jerez paddock was buzzing on Thursday. Ferrari chairman Piero Fusaro had called a meeting with team manager Cesare Fiorio and Nigel Mansell following a week of reported feuding within the team. Prost, after finishing third the pre-

vious week and throwing in the towel on his title bid, had been persuaded to carry on fighting with the full backing of "everyone in the team". A team meeting was held in the Ferrari garage and a press conference afterwards. Nigel Mansell, however, showed few signs that he was impressed with being asked to drive for the team and not for himself. "I only know one way to drive," he said. "I want to win and to win here, in Japan and in Australia."



Mansell avoids Williams talk as Boutsen agrees terms with Ligier

Mansell's attitude was at odds with his performance in the race, of course, when he drove supremely well as PROST's supporter. After the traumas of Martin Donnelly's accident, however, the last thing anyone expected was for Mansell to confirm he was going to come out of retirement and switch teams to Williams. But that was the strong rumour both before and after the race, with stories reporting the Isle of Man star was poised to sign a \$6 million deal to go to the Didcot-based outfit as outright number one driver. This, of course, followed the news that Belgian Thierry Boutsen had agreed a two-year deal with Ligier, an announcement made on Saturday morning in Jerez. Boutsen

said he wanted the freedom of influence of Prost at Ferrari and was pleased with the offer from the French team which will have Renault engines, of course, in 1992. Mansell, an early departure after the race, was meanwhile reported to be on his way to the Isle of Man with Williams commercial director Sheridan Thynne in order to sign a contract for next season. The following day all the rumours turned to reality with Mansell joining Williams for 1991.

Mansell in the news - at home

Mansell was also in trouble with his local Isle of Man neighbours according to a newspaper from the island which circulated in the paddock. It reported that the Englishman had built a wind-break close to his home, incurring the wrath of his neighbours and upsetting the local bureaucrats because he had done it without planning permission.

Reynard outlines his plans

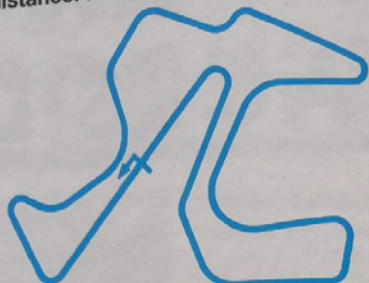
On Saturday morning, there was a visit to the paddock by Adrian Reynard who reiterated his plans to run his own F1 team in 1992 with the ambition of winning its first race. Reynard said he had not decided on his engine supplier but expected to by the end of the year.

1990 FORMULA ONE
GRAND PRIX
RACE No. FOURTEEN

JEREZ
SPAIN

30 SEPTEMBER 1990

Circuit length: 2.621 miles/4.218 km
Race distance: 73 laps (191.334 miles/307.914 km)



DRIVERS' WORLD
CHAMPIONSHIP

Pos.	Driver	Total
1	Ayrton Senna	78
2	Alain Prost	69
3	Gerhard Berger	40
4	Nigel Mansell	31
5	Thierry Boutsen	30
6	Nelson Piquet	26
7	Alessandro Nannini	21
8	Riccardo Patrese	19
9	Jean Alesi	13
10	Ivan Capelli	6
11	Eric Bernard	5
12	Derek Warwick	3
13	Alex Caffi	2
	Stefano Modena	2
	Satoru Nakajima	2
	Aguri Suzuki	2
17	Mauricio Gugelmin	1

CONSTRUCTORS'
WORLD
CHAMPIONSHIP

Pos.	Team	Total
1	McLaren	118
2	Ferrari	100
3	Williams	49
4	Benetton	47
5	Tyrrell	15
6	Larrousse	7
	Leyton House	7
8	Lotus	3
9	Arrows	2
	Brabham	2



Prost: pep talk about to pay off.

OFFICIAL STARTING GRID

Alain Prost Ferrari 641	1.18.824	1	27	Ayrton Senna McLaren-Honda MP4/5	1.18.387
Jean Alesi Tyrrell-Ford 019	1.19.604	4	2	Nigel Mansell Ferrari 641	1.19.106
Riccardo Patrese Williams-Renault FW138	1.19.647	6	28	Gerhard Berger McLaren-Honda MP4/5	1.19.612
Nelson Piquet Benetton-Ford B190	1.19.700	20	5	Thierry Boutsen Williams-Renault FW138	1.19.689
Derek Warwick Lotus-Lamborghini 102	1.20.610	11	19	Alessandro Nannini Benetton-Ford B190	1.20.367
Mauricio Gugelmin Leyton House-Judd CG901	1.21.167	15	23	Pierluigi Martini Minardi-Ford M190	1.21.060
Satoru Nakajima Tyrrell-Ford 019	1.21.215	3	26	Philippe Alliot Ligier-Ford JS338	1.21.170
Emanuele Pirro Dallara-Ford BMS190	1.21.277	21	30	Aguri Suzuki Larrousse-Lamborghini 90	1.21.244
Eric Bernard Larrousse-Lamborghini 90	1.21.551	29	22	Andrea de Cesaris Dallara-Ford BMS190	1.21.467
Nicola Larini Ligier-Ford JS338	1.21.996	25	16	Ivan Capelli Leyton House-Judd CG901	1.21.910
Gabriele Tarquini AGS-Ford JH24	1.22.466	17	14	Olivier Grouillard Osella-Ford FA1M	1.22.288
Yannick Dalmas AGS-Ford JH24	1.22.716	18	12	Martin Donnelly Lotus-Lamborghini 102	1.22.659*
Michele Alboreto Arrows-Ford A11	1.23.161	9	8	Stefano Modena Lotus-Lamborghini 102	1.23.133

*Martin Donnelly did not take the start due to an accident during Friday's Qualifying Practice.

RACE CLASSIFICATION

Pos.	Driver	No.	Nat.	Car	Laps	Time/Retirement
1	A. Prost	1	Fra	Ferrari (G)	73	1:48.01.461
2	N. Mansell	2	GB	Ferrari (G)	73	1:48.23.525
3	A. Nannini	19	Ita	Benetton-Ford (G)	73	1:48.36.335
4	T. Boutsen	5	Bel	Williams-Renault (G)	73	1:48.44.757
5	R. Patrese	6	Ita	Williams-Renault (G)	73	1:48.58.991
6	A. Suzuki	30	Jap	Larrousse-Lamborghini (G)	73	1:49.05.189
7	N. Larini	25	Ita	Ligier-Ford (G)	72	
8	M. Gugelmin	15	Bra	Leyton House-Judd (G)	72	
9	Y. Dalmas	18	Fra	AGS-Ford (G)	72	
10	M. Alboreto	9	Ita	Arrows-Ford (G)	71	
R	D. Warwick	11	GB	Lotus-Lamborghini (G)	63	Gearbox
R	I. Capelli	16	Ita	Leyton House-Judd (G)	59	Exhaustion
R	G. Berger	28	Aut	McLaren-Honda (G)	56	Accident
R	A. Senna	27	Bra	McLaren-Honda (G)	53	Radiator leak
R	N. Piquet	20	Bra	Benetton-Ford (G)	47	Battery
R	A. de Cesaris	22	Ita	Dallara-Ford (P)	47	Engine
R	O. Grouillard	14	Fra	Osella-Ford (P)	45	Bearings
R	P. Martini	23	Ita	Minardi-Ford (P)	41	Lost wheel
R	P. Alliot	26	Fra	Ligier-Ford (G)	22	Spun
R	E. Bernard	29	Fra	Larrousse-Lamborghini (G)	20	Gearbox
R	S. Nakajima	3	Jap	Tyrrell-Ford (P)	13	Spun
R	G. Tarquini	17	Ita	AGS-Ford (G)	5	Spun
R	S. Modena	8	Ita	Brabham-Judd (P)	5	Accident
R	E. Pirro	21	Ita	Dallara-Ford (P)	0	Throttle
R	J. Alesi	4	Fra	Tyrrell-Ford (P)	0	Accident



Jerez: Tio Pepe talk!

Fastest Lap: R. Patrese (6) Lap 53
1.24.513, 111.647 mph/179.674 km/h
(G) = Goodyear tyres, (P) = Pirelli tyres.

FASTEST LAPS

1. 1.25.177	28. 1.26.250
2. 1.26.957	27. 1.27.430
19. 1.26.599	20. 1.25.095
5. 1.27.206	22. 1.28.471
6. 1.24.513	14. 1.29.692
30. 1.27.158	23. 1.28.314
25. 1.26.104	26. 1.29.329
15. 1.26.773	29. 1.29.296
18. 1.27.710	3. 1.30.347
9. 1.28.712	17. 1.31.062
11. 1.26.252	8. 1.31.467
16. 1.28.436	

- Senna's 50th pole in 108 races.
- Prost's 44th victory in 167 races.
- Prost's fifth victory of the year.
- First time both McLaren cars have failed to finish this year.
- First time both AGS cars have qualified this year.
- Next round: Japanese GP, Suzuka, October 21st.

NON QUALIFIERS

No.	Name	Car	Time
7	D. Brabham	Brabham-Judd	1.23.163
24	P. Barilla	Minardi-Ford	1.23.274
10	B. Schneider	Arrows-Ford	1.23.924
31	B. Gachot	Coloni-Ford	1.25.114

● David Brabham was baulked by several drivers, including Eric Bernard, in final qualifying.
● Paolo Barilla continued to suffer from not being supplied with the quick Pirelli tyres and later had fuel pump problems.
● Bernd Schneider, driving for only the second time for Arrows, suffered from inexperience and had a dramatic accident on Friday leaving Arrows with just two cars on Saturday.

The Ferrari's sparkle set the Championship alight again.

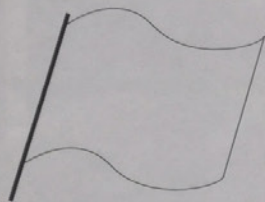


PREQUALIFYING

No.	Name	Car	Time
18	Y. Dalmas	AGS-Ford	1.22.470
17	G. Tarquini	AGS-Ford	1.22.592
14	O. Grouillard	Osella-Ford	1.22.708
31	B. Gachot	Coloni-Ford	1.24.603
33	R. Moreno	EuroBrun-Judd	1.24.621
34	C. Langes	EuroBrun-Judd	1.25.736
39	B. Giacomelli	Life	1.42.099

- Bruno Giacomelli only did two laps because of an electrical problem and was 17 seconds slower than the other two non prequalifiers, the EuroBrun drivers, who themselves complained of lack of power, set-up experience and testing.

The next issue of *Prix Editions* will carry in-depth features on the issue of safety in Formula 1. In the aftermath of Martin Donnelly's accident at Jerez, it seems worthwhile simply to record the reactions of various parties, without prejudice to anyone, and in the interests of opening up the debate as the sport's governing body seeks ways of protecting all participants.



A. AN ACCIDENT OF TIMING

It was ironic that the FISA, just a few days before Martin Donnelly's accident at Jerez, should issue a statement on "SAFETY IN COMPETITION" and list actions taken by the sport's governing body. Here is the text of that document, and its particular notes on Formula 1:-

"For the past 12 years SAFETY, both ACTIVE and PASSIVE, has constantly been the subject of new priority regulations, through the impetus of the International Federation and its President. Very often, it has been under the threat of numerous legal proceedings and against the opposition of several - and sometimes all - of the manufacturers, that the FISA has imposed short-term modifications. The FISA has been alone in conducting this campaign, the legal aspects of which are sometimes threatening, and in doing so has saved and will continue to save the lives of numerous drivers. Much has been said about the recent spectacular accidents involving D. WARWICK or G. BERGER, but the FISA would like to remind you of all those areas in which the technical regulations have been modified, sometimes at the cost of imposing heavy expense on the less wealthy teams."

The statement is signed by FISA Secretary-General Yvon Leon, and is followed by this list:-

1982 - Introduction of the survival cell (1982 was a desperate year for Formula 1, with the deaths of Gilles Villeneuve and Riccardo Paletti, and the appalling injuries suffered by Didier Pironi - Ed.)

The Safety Issue

Part 1: The Reaction to Jerez

1983 - Banning of skirts and imposition of the flat bottom

1985 - Obligation to carry out a frontal crash test

(1986 was another sorry year, with the death of Elio de Angelis at Paul Ricard testing when the rear wing came off his Brabham and the car turned upside down as it left the track; and at Brands Hatch, Jacques Laffite's F1 career ended when his legs were seriously injured in a heavy accident on the first corner - Ed.)

1987 - Introduction of valves to limit the power of supercharged engines

1988 - Introduction of lateral static tests for the monocoque

• Moving of the pedal box rearwards to behind the axis of the front wheels

(1989 brought further tragedy when Philippe Streiff was left paralysed by a huge accident in pre-season testing in Brazil, the damage being caused by impact in a car that turned upside-down and lost its roll-over bar; then at Imola Gerhard Berger's Ferrari burst into flames after crashing heavily into the barriers - Ed.)

1990 - Creation of the penetration-proof bag for the fuel tank

• Increase of the dimensions of the cockpit and its opening to enable a driver to evacuate in 5 seconds (test compulsory under FISA control)

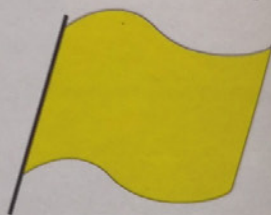
- Improvement of rear visibility
- Increase of the dimensions of the safety rollbar
- Introduction of the static test for the safety rollbar
- Introduction of the lateral static crash test for the frontal protection
- 1991 - Limitation of the dimensions of the front spoilers

• Obligation for the fuel tank to be located between the cockpit and the engine in a better-protected position

• Banning of lateral tanks

• Improvement of protections for all lines

• Increase of the number of static tests for resistance to lateral impacts



B. THE LOTUS REACTION

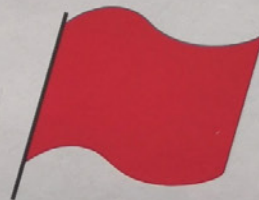
Frank Dernie, Technical Director of Team Lotus, said he was "appalled" by the severity of Donnelly's crash: "Martin's survival from such a high-speed, head-on impact means that FISA's safety measures built into the construction of current Grand Prix cars seem to have saved him from further serious injury. In absorbing the massive energy of the impact the composite monocoque was fragmented. I am amazed that it is possible to survive such an impact; with any other kind of material used for the monocoque, Martin would probably not have survived."

The most extraordinary consequence of Martin's misfortune was the behaviour of Derek Warwick, who overcame his apprehensions and not only got back into his own car but put it 10th on the grid to match his best qualifying performance of the year. "Following Martin's unfortunate accident", said Derek, "there were obvious questions as to whether we would as a team continue to compete at Jerez. When I got out of bed [on Saturday morning], I didn't want to race. And at five to ten I was still discussing the technical situation of our car with

Frank Dernie and Steve Hallam. Obviously it has been very difficult for us to pinpoint the exact cause of the crash, because the car is smashed to tiny pieces. But Frank and Steve outlined a couple of possible causes which were fixed overnight and I decided to compete. It was my decision, and there had been no pressure put on me by the team or the sponsor.

"The decision was still one of the most difficult decisions I've had to make. One of the biggest difficulties I faced was whether I could take the corner where Martin crashed flat-out or not. I could have looked quite silly out there and let a lot of people down. Thankfully I didn't. The team have pulled together under very difficult circumstances and we've come out of it with a good grid position."

On Sunday, after fighting up towards the points only to retire with a broken gearbox, Warwick's comment, typically, was: "After what happened to Martin on Friday, it would have been good for the whole team to have finished sixth."



C. THE OTHER DRIVERS

Ayrton Senna: "After Donnelly's accident, which was a sad moment for all of us, I went to see the place where he was on the ground, and when I saw the immediate consequences of the incident by myself and with my own eyes it was very difficult to cope with it, to retain balance, to understand it and to absorb it. I thought about not running again, but I had some minutes on my own, quiet in the motor home, and I was able to go through with it. They were special moments."

"On that lap on Friday I just drove as I always drive. Despite the circumstances, I tried to put it away from my mind. It was such a major accident, you cannot put it away from your mind completely. It makes you realise more and more how fragile you are and that something like this can happen to any of us drivers, because there are risks that are calculated and therefore limited, and there are some situations which are out of control. And those situations which are out of control can happen to anybody, so it is a difficult thing to cope with. But it

gives you some more self-preservative feelings when you go to drive next time or when you feel you are close to the limits.

"This is not the most dangerous circuit in the world, but it is a dangerous circuit. We go to 16 different places during the year and we go through some corners which are not compatible with the speed we are doing and here in Jerez as in many other places we have problems. There are not enough run-off areas at some corners and the set-up on this circuit at some places is not appropriate for having what I would call a minimum safety margin.

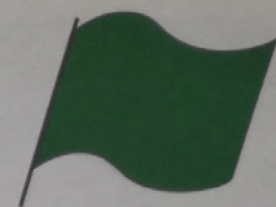
"But as much as here is dangerous, you can say that Belgium is also dangerous in some places, not the whole circuit. You can say Portugal is also dangerous in some spots, and you can say that Monza is also dangerous when you go through Lesmo in fourth or fifth gear, with no run-off area.

"I think as much progress as you can make on the cars to prevent injuries is never enough. And as much progress as you can make on the racing circuits putting run-off areas appropriate to the speeds we are doing is never enough either. Surely if where the accident happened there were another 50 metres and some gravel you wouldn't have seen such a major breakage in the car; I think since we have 16 races, and there are many more circuits applying to get a Formula 1 race in the future and in the present, it gives the opportunity to the people concerned to consider other places who are prepared to offer better facilities for F1 to come there, for drivers to race in a safer way and for a better show for everybody.

"So I think it is possible to improve not only the race circuits but also the car specifications for safety reasons. It is a question of doing the right things, not just making changes and doing things, but really doing the right things to make it all happen in the right way."

Nigel Mansell: "I take that corner flat in sixth - or I used to. Now I cannot go round there without thinking of it any more. I ease off. I would like to see that fencing moved back 500 yards."

Derek Warwick: "I don't mean to be blasphemous but God was there on Friday. I could not believe he would survive that. It was the closest I have ever been to anything like it. And getting back in my car on Saturday was the toughest thing I have ever done in my life."



D. THE PROPOSALS

A FISA press release dated September 9 had already outlined the proposals on safety and organisation to be discussed on October 8. Where Formula 1 is concerned, the release referred to the following changes:-

A. CARS AS FROM IMOLA 1991
Extension of the flat bottom from the front edge of the complete front wheel to the rearmost part of the bodywork (in order to cancel downforce).

• reduction of front and rear wings

• new fuel definition

• increase of the minimum weight to 540 kilos in order to also prepare for increased cockpit dimensions for 1992 defined according to a driver's average size

• 1992 new cockpit dimensions

B. CIRCUITS

• modification of the circuit of Budapest in order to facilitate overtaking

• widening of the La Source hairpin on the Spa circuit

• the Circuit Commission has been given additional instructions to study any other measures on the World Championship circuits.

Other provisions allowed for the inspection of the Magny-Cours circuit in France on September 24, and threatened penalties for blocking or obstruction by cars about to be lapped.



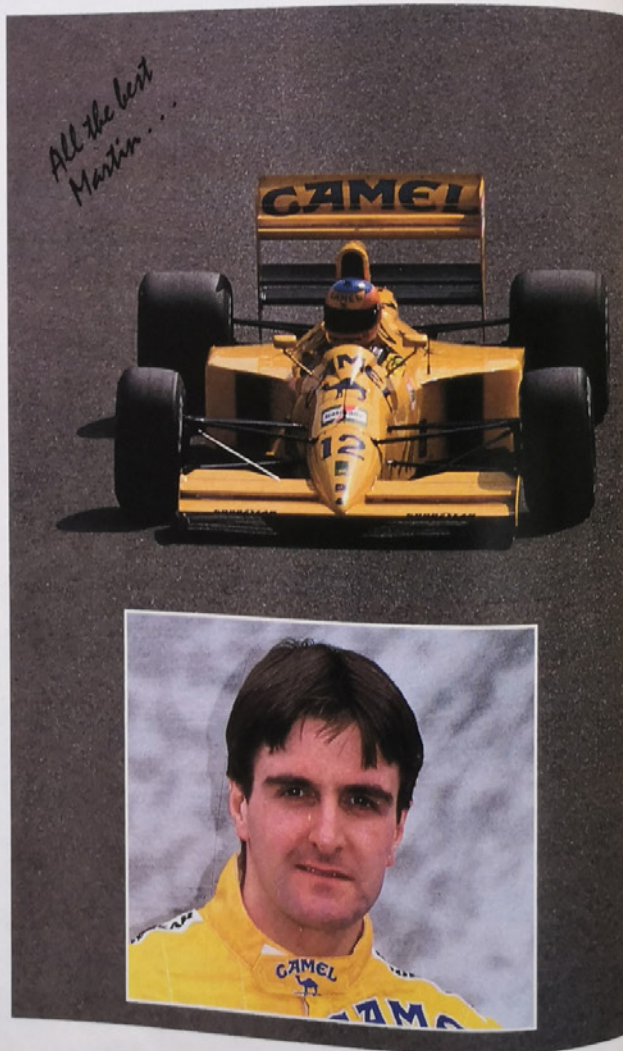
STRAIGHT LINES

THE DEREK WARWICK COLUMN

I had planned to tell you about the racing side of things but that doesn't mean a lot after what happened recently in Spain. I am writing this shortly after Martin's accident there. Accidents are in the back of everybody's mind in motor racing but you dread it happening to anyone — much less your own team-mate. He is a part of the family that makes up your team, part of you, and anything that happens to him affects you very closely.

When I first saw his car I feared the worst. I prayed but I could not believe anyone could survive it. The car had been destroyed in the impact. When I found out Martin was alive I felt so elated. I am not a religious person but that kind of thing really makes you believe in God. Something, somehow, just came along and he was picked out of there at the right time.

Getting back into the car was one of the most difficult things I have ever done in my life. And, arriving at the circuit the next morning I knew, in my own mind, that I did not really want to drive. I needed to be assured, first, that the car was ready after the team had been up until 5 a.m. doing some modifications and then I had my doubts about driving again after what had happened to a close friend — that was a personal thing. It is hard to explain ultimately why I did finally decide to drive. Some people say I was very brave. But perhaps I would have been a braver person to have said no. No-one put pressure on me to drive. Richard Grundy, from our sponsor Camel, said they would understand if I decided not to — and the team said the same. We discussed it right up until 15



"One of the most difficult things I have ever done in my life".

minutes before qualifying. It was really only then that I finally decided to go out again. The rest of the weekend just happened. I don't particularly want to remember any part of it. The one thing I hope is that Martin makes a full recovery and, if he wants to, gets back in a Grand Prix car again because he is a talented lad; take it from me — I have been racing against him all year.

Alain Prost is absolutely right when he says that the safety facilities at that circuit are not good enough. They need to be stepped up considerably in several places. Motor racing is advancing every day and some circuits, like Jerez, are not keeping pace with the developments. If they don't they shouldn't be allowed to host a race. But it is not as simple as that because the FISA are trying to make racing safer and it is also down to

***I remember thinking
"this is going to be a
big one".***

the teams to play their part. Everybody must make an effort.

At Monza I had been very, very, lucky when I had my accident at Parabolica. We had tested there before the Grand Prix with the latest generation Lotus 102 and really there had been no significant improvement in performance. It was a shame, really, because we had pinned our hopes on that car, and that test. Anyway we decided to use the one new car we had and coming around on the first lap I got a little too close behind Gugelmin flat in fifth when I lost the ground effect on the front and the steering with it. Once I was on the grass that was it, the car was completely out of control. I remember thinking "this is going to be a big one". Throughout the accident I didn't lose consciousness. I remember the car sliding on its side and thinking how long it was taking to stop. I began to organise myself mentally and, at first, I wasn't sure how quickly to get out because I thought the car might be hit from behind by one of the others. When I realised I had got away with it my first thought was, "I'm OK," and then "where's the spare".

I started heading for the Lotus garage and then realised if I wasn't quick I would have to start from the pit lane. That would do my chances



Monza: sadly, little to show after my big one.

no bloody good at all so I broke into a run. You should have heard the crowd. I couldn't believe the noise, even through my helmet and ear plugs.

When I got back to the pits everybody was calm but we had several things to do and it was a hive of activity around the spare. The team made sure I changed my helmet because it had scratches from the road and could have suffered as a result. I drove around to the grid and the noise, even round the back of the circuit by the Lesmos, was incredible. It really got to me.

When I got the car on to the grid I was faced with the most frightening part of all. The FISA medical delegate, Prof. Sidney Watkins, or "Sid" as we call him, wanted to check me over and guided me into the back of his medical car on the grid. I was frightened rigid that he wouldn't let me race. He talked to me, did a few tests and gave me the "OK". I was so relieved. Being in the car again was the easiest part of all. It was like, being somewhere comfortable, familiar... the office, if you like.

Unfortunately my race car had special BP fuel and the spare, in which I took the re-start, was much slower without it. That's not an excuse. I was frustrated to be without the extra power because it looked as if the accident had affected me and that wasn't true. I wouldn't have even got in the car if that was the case. The spare was also a lot more twitchy than the race car and that meant I had to slow up too. In the event the car only lasted 16 laps before the clutch went.

When I sat at home afterwards I really had cause to be grateful to people like, FISA, in particular Jean-Marie Balestre, Alain Prost, Jackie Stewart and a lot of other drivers — in particular Niki Lauda — for all they have done to improve safety.

It's been a bad year but I would be happy if I could end it with Martin on his way to a full recovery and I hope to see him in Grand Prix racing next year — I'm sure I speak for everybody at Prix Editions and our readers. What the future holds for me I haven't decided yet. I hope to have some news for you in the next column...

CANON — GREAT SHOTS IN OUR KODAK PHOTO COMPETITION!

We set all you amateur lensmen a keen deadline with the photographic competition in our special PE/Kodak supplement with the British Grand Prix issue. Any editor would have been proud of the way you all responded — and wished his regular contributors always did as well!

The short time we allowed you made up-to-date shots virtually impossible, but we received an amazing number of older masterpieces that demonstrated how talented some 'amateurs' are. Attention to detail, mastery of the camera's controls and, above all, a good eye are not the province of professionals alone.

All of the pictures we received might, in fact, have been winners, whether they showed a touch of imagination in the choice of subject, or treated standard F1 subjects with a dash of difference.

Our panel, including Darrell Ingham and PE photographer Pascal Rondeau, both from the highly-regarded Allsport agency, took some time to arrive at a short list of 10 before running the eyeglass over them all again to see which three had that certain something to set them apart.

In winning order, the three were:



First Prize: Peter Maynard of Devon, for his atmospheric shot of Philippe Alliot at the European Grand Prix, Brands Hatch 1985. This was, you will recall, the race that made Nigel Mansell a winner at last, but Peter's choice of subject shows you don't always have to focus on the big boys to make your impact. While the car itself may not be pin-sharp in the frame, the judges felt that this picture was so different from the usual motor racing photograph it deserved the nod. Many congratulations to Peter, who now has a Canon EOS 700 to make big shots even easier in future!

Second Prize, Nigel Keeling of Solihull, with his superb portrait of Gerhard Berger. This was the judges' pick of a large number of portrait studies submitted. Nigel wins a Sigma 70-210mm f4/5.6 zoom lens to open up more close-up possibilities.

Third Prize: P. M. Kerr of Leeds, for his dramatic action shot. Had the Williams been the car in focus, this might well have been the outright winner — which simply underlines the split-second timing the professionals use to get sharp results virtually every time. Mr Kerr wins a Sigma 28-70mm f3.5/4.5 zoom lens.



Our thanks to Kodak, Canon and Sigma for their generous support, and to all who entered, and our genuine congratulations on the standard of work submitted. Keep the shutter fingers working — and watch out for more competitions coming into focus!



Alessandro Nannini's emergence as Ferrari's most wanted man completed one of the most remarkable revivals of this Formula 1 season. Early in the year there were knowing nods around the paddock as Nannini laboured to keep in touch with his new teammate, the suddenly rejuvenated Nelson Piquet. "So much for the future star", was the common sneer.

The strain appeared to affect the Italian's driving. It seemed the harder he tried the more likely it was he would go off. There was no question the Benetton-Ford had been improved, Piquet's results confirmed that.

But then, just as Nannini was being consigned to the ranks of those who flattered to deceive, he began to find his way again. By late summer, he was even showing Piquet the way. In Germany he was magnificent, beaten only by Ayrton Senna's inevitable late lunge. In Hungary he was again magnificent, only to be put out by a more dubious thrust from Senna. In Belgium, too, he proved a stubborn opponent for McLaren, jousting with Gerhard Berger before having to cede third place.

The world has looked on with renewed admiration. Gordon Message, the Benetton team manager, has looked on with immense relief. Message says: "I think initially Sandro was a little blown out of it by Nelson. He didn't really know how to cope

The Nerve to say No to Ferrari: Alessandro Nannini

by
DERICK ALLSOP

with the situation. Nelson helped us a tremendous amount in our testing; he draws on his experience. Sandro, of course, is far less experienced.

"On top of that, Sandro had a run of bad luck in the first half of the season. He had numerous accidents, which has not generally been the case over the last two or three years. All right, in his Minardi days it was quite common to see him in the barriers,

but since he's been driving for us he hasn't had more than the average number of accidents. But this year, for some reason, he had more than his fair share and there is no doubt it affected him.

"It could be that he was put under pressure, that he didn't expect so much from Nelson. Sandro likes to work with people he knows, people with whom he feels he has a relationship and an understanding. He was also given a new race engineer this year, so he needed time to build up that relationship as well. But he gets on fine with Nelson and they hit it off very quickly. I must admit I was expecting that to be a problem because of things I'd heard. In fact, we have had none of that. Nelson's fine. He doesn't present a problem in that area at all. The two of them converse in English and Italian, they laugh and joke together and we have no trouble with them.

"Sandro had one or two good performances in between the accidents and gradually the good performances began to outnumber the accidents. Now he's had one or two races where he's been running at the front, running with the best, almost certainly with a power disadvantage, and that has given him the confidence he needed. It has brought the best out of him.

"A prime example was when Berger tried to overtake him at Spa. He actually retaliated. That was

something he wouldn't have done before. If he didn't think he could run at that sort of pace he would have let the quicker car pass. He isn't intimidated any more and he won't be again, I'm sure."

A couple of off-track developments may also have contributed to the making of the more assured, more relaxed 31-year-old Nannini. Message explains: "He's stopped smoking and he's stopped drinking so much espresso coffee. I've tried to stop smoking and I know how difficult that is. He's done very well. Part of the reason for cutting down on the coffee is the anti-dope regulations that are in force now. I think he's allowed three small coffees a day now instead of 33..."

Can Nannini, having patched up his reputation, go on now to prove himself a winner, even a driver capable of joining Piquet on the list of World Champions? Message is positive in his reply: "Yes, I would definitely say he is a potential winner. Most definitely. I'm sure we don't have the strongest pairing in the pit lane at the moment but there aren't many people I'd willingly swap them for. We have Nelson, who has something to prove still. People have written him off. I think they've now been proved wrong. He has been quite desperate to prove his critics wrong and I believe he is doing that.

"Sandro hasn't proved anything yet in the way of Championship wins. He is honest enough to tell you he doesn't regard his win in Japan last year as a true win. He was given it because Senna was disqualified: he'd much prefer to win a race fair and square. But he's a potential winner of any race these days, in my opinion. Hopefully he'll string a few together, then he would certainly be Championship material."

Championship material for Ferrari? The challenge is tantalising, yet daunting. Ask Nigel Mansell. Alain Prost's hold on the team appears total. And when he leaves, the chances are Senna will take over. Ferrari's trail through Formula 1 is cluttered with the wreckage of broken dreams. Only for the very few, the few with the strength of character and political cunning as well as exceptional driving skills, does the reality approach the dream.

As Jackie Stewart observes: "It takes a certain kind of man, with a certain kind of strength not only to survive at Ferrari but to pull the team together. Fangio had it, Lauda had it. In today's racing, Prost has it. You just have to stand and watch what

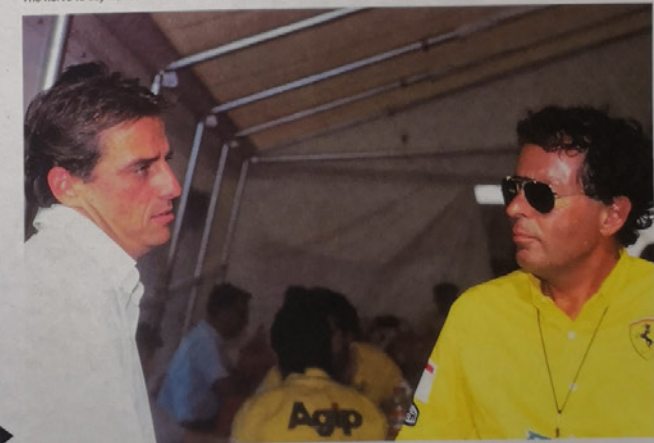


Minardi days: Sandro at Monaco where the barriers are unforgiving



Germany 1990 - a brilliant return to form

The nerve to say no: Sandro with Ferrari's Cesare Fiorio



happens in the Ferrari pit to understand it. Prost has the ability to get everybody working around him. He has them hanging on his every word. He runs things. HE is the man. And you have to say he has made Ferrari this season. I am a great Nigel Mansell fan. He is a fantastic, aggressive driver, and we'll miss him. But he will know now that there is much more to it than merely driving at Ferrari."

Nannini knows it too. He will no doubt have been encouraged to dwell on the cons rather than the pros, but in the end his reasoning was both sound and bold. He felt he would be better off staying at Benetton than answering the call from Ferrari. Yes, he acknowledged that it was every Italian's dream to drive for Ferrari and yes, he was honoured they had even thought of him. But he had enjoyed life at Benetton and he believed they offered him the brighter future.

Turning down Ferrari: that verdict was surely testimony to Benetton's recovery from a long, dark and difficult winter. The famous smile had gone off the face of Formula 1's fun team; the disco music boys had lost their rhythm, morale was low.

Message says: "I was very concerned about that. It had been known as a happy team and that was something I, as much as anybody, wanted to hang on to. The guys work hard and they need to enjoy themselves at the same time. The race team morale is on the way back and hopefully the same will happen at the factory, though that's a little more difficult."

Message's feeling for the team is deep, natural and sincere. He joined

the then Toleman outfit as they were squaring up for Formula 2 action and has tackled just about every job on his way to becoming team manager in succession to Peter Collins. In many respects 36-year-old Message is a reluctant team boss - and an unlikely one. He confesses: "There are certain sides to team management that I don't like at all and that I'm not at all interested in. I'm talking about politics, sponsorship and all that sort of thing. I can't say I was particularly surprised to get the job. I had taken over in a similar situation when Roger Silman left Toleman. I found myself in that position again when Peter Collins left. I'm not a Peter Collins, though, I just do things differently. I'm a racing man and I prefer the technical side."

Message's down-to-earth style has undoubtedly played a significant part in the restructuring of Benetton. He, in turn, applauds the influence of the two designers crossing paths at the camp this season, Rory Byrne and John Barnard. He says: "At the end of the day you have to have the car to compete and this year's car, designed by Rory, has enabled us to grow in strength again. There has been some input from John. I can't be specific, but there was a little bit at the start and there have been some aerodynamic improvements during the course of the year."

Barnard has no doubt introduced his own working framework, based on order and operational units. The team's factory remains at Witney, Oxfordshire, but Barnard is establishing a technical facility at Godalming in Surrey. Message again: "The facility

should be fully operational by Christmas. Godalming will concentrate on R&D, Witney will run the race team and manufacture as much as possible in terms of our requirements for next season, including the chassis and most of the composite items. There may be a few parts made at Godalming, to ease the workload. Next year's car is John's and it's well under way. He's on a different planet. He's thinking miles ahead. His ideas will, I'm sure, surprise a few people in the near future."

Will next year's car have a semi-automatic gearbox? "I wouldn't be surprised if we saw something similar. Maybe not next year, but the year after. John is out in front and he's certainly working hard at staying out in front."

What about the Benetton effort as a whole? "At the beginning of the season I certainly thought it would be a tall order to beat McLaren and Ferrari. I was hoping Ferrari might shoot themselves in the foot but they haven't. We need to beat Williams. That's the realistic contest. I think we race better than Williams generally and quite a bit better sometimes. Qualifying is different: we don't have the power or the fuel concoctions others have. I think the potential, though, is vast. Cosworth are doing a fantastic job with the V8, we had the drivers and Camel sponsorship sorted out very early. Add to that John's expertise and there's no limit to what we might achieve in the next two years. Yes, even the Championship."

PE

Benetton have put the colour back in Piquet's driving



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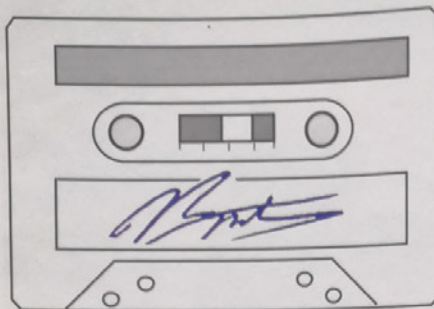
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T.B. Talking

A CASE OF INTERNAL BRUISING

Thierry in conversation with Pierre Van Vliet

A lot of things have happened since my last column and for me, of course, the most important is my move to Ligier for the next two years. After a long spell of uncertainty, I am relieved to have my future settled, and happy to be joining a team with real potential - one for which I shall be giving my all.

Looking at results alone, the last two seasons have been very positive. The Canon Williams Team enabled me to win three Grands Prix and score nearly 70 World Championship points, so I can't complain. With the obvious exception of Prost and Senna, during that time I was the driver who scored most points and took most victories (the latter jointly with Mansell). Without wishing to open up a fruitless debate or indulge in petty arithmetic, my teammate Riccardo Patrese cannot claim as much, and I am a long way ahead of him in the Championship - 11 points after Jerez. I feel I have got the best out of the Williams-Renault and given of my best in every case. As an enthusiastic professional, I haven't stinted on private test days, too many of them sadly unproductive. Before the Portuguese Grand Prix, I spent another three days at Budapest on back-to-back testing with the active suspension car. In a word, I don't think anyone can level any criticism at me.

Obviously working within a team while you are unsure about your own future is very difficult. But I have refused to let myself be unsettled, and concentrated as much as I could on my driving. I think the way I won the Hungarian Grand Prix from pole position proved I could win races if I had the equipment to do the job. Even following that win I don't feel I was given the credit I deserve. Despite the huge satisfaction of having led a tough race from green light to chequered

flag, I knew that day that my Williams future was in jeopardy.

There's probably no need for me to say I'm sorry about this state of affairs. We went through endless testing only to keep coming back to the original solutions. I think Patrick Head would be the first to admit that it has become very frustrating for all of us, as we have spent many hours travelling across Europe to try many different set-ups. So the cars haven't kept pace with the opposition's development, and whereas we were able to fight it out with McLaren and Ferrari at the start of the season (in Brazil and at Imola), we have gradually given more and more ground to our rivals. If we leave aside the Hungaroring, a track that suits our cars and the Renault engine particularly well, we haven't been able to hold station since the start of July. In Estoril and Jerez, once again, we were short on sheer performance and, in the case of Portugal, on reliability as well: the car lacks grip, we're loading on more downforce and wearing our tyres - in short, it's a vicious circle.

Despite the regular recurrence of all these problems, I have shown patience and loyalty towards my employers. Despite persistent rumours, I decided to wait and hope for results to improve along with the human relations within the team. Sadly, it never happened, and with the valuable help of my manager Ortwin Podlech I decided to look at the offers that had been coming in since the start of September.

Ligier's was the most attractive. I followed the proposal up in Estoril and immediately after the Portuguese race I went to meet Guy Ligier at Magny-Cours and go over the ultra-modern facility the team has been enjoying there for the last few months. I won't disguise how impressed I was by the huge potential I saw there: there are only a few things Ligier still needs to become a top team once more.

They need to hire a co-ordinator to integrate all the separate, efficient, highly-motivated units into a working whole. The longer term is taken care of with the contract for Renault Sport to supply engines from 1992. I'm sure that with the Lamborghini V12, 1991 will let us put all the mechanisms for future success in place while some useful results start us on the way back. What really pleased me at Ligier was the enthusiastic reception I got, and the confidence being shown

in me. My contract puts me on an even footing with the team and states I will be privy to all the important decisions in technical and sporting matters. So my role will go far beyond just driving, and I'm delighted at that because I feel my personal experience of F1 can bring quite a lot to my new team.

Of course I'll have the chance in future columns to take a further look at this new framework to my career, but while not trying to whip up popular support, I want you to know as of now how excited I am by the challenge. In human terms I have been through two very difficult seasons with Williams. Thinking about it, I feel a bit bruised inside, and I'll be doing my utmost in the last two Grands Prix to make them sorry I'm going! But I don't regret a thing, and I'm keen to be about my new task.

PS: I can't end this column without sending my best wishes to Martin Donnelly for a speedy recovery. Why do we always have to wait for a serious accident before taking radical steps? For two years now we have seen rapid ad-



Budapest victory - didn't fit the script!



"To race is to live. Everything else is just waiting." Those two sentences have been the motto of many a racing driver. Unfortunately, Bertrand Gachot has been doing a lot of waiting this year. He failed to pre-qualify his Coloni in the first 10 Grands Prix of the season. And when, in Belgium, he finally did pre-qualify engine problems ensured that he would not qualify for the race itself.

To be a Grand Prix driver, yet only to get to drive a Formula One car for a few laps during a one-hour session on Friday morning is a frustrating ordeal. But Gachot has survived.

"Sometimes I'm surprised at myself for not getting annoyed or losing my temper, or losing hope," Gachot says. "But human nature is sometimes like that: you can do bigger things than you believe in. Most of the time I have been successful in my racing career. I won championships, and I was always in front - at least I was in the battle for the championship. This year is completely the opposite. It's tough."

"Also, the Coloni team is a completely new situation for me. Last year, I learned with Onyx. We had a very competitive car, but it was new, so it took a bit of time to develop. But eventually it was quite a good car. This year was completely different."

This year involved a new battle as the Coloni team tried to run the Subaru flat 12. The engine, however, needed more development, and Coloni switched to Ford Cosworths halfway through the season. Meanwhile Onyx, Gachot's old team, was deteriorating and heading for collapse.

Gachot and Onyx both made their Grand Prix debuts last year. He and Stefan Johansson were teammates on the Moneytron Onyx team. Gachot had graduated to F1 after a successful climb through the Formula Ford, Formula 3 and Formula 3000 ranks. As he said, the first half of 1989 was a struggle but Onyx consistently improved.

Johansson emphasized the point by scoring a third place in Portugal. By that time, however, Gachot was no longer

The Other Belgian: Bertrand Gachot

by
DAN KNUTSON

with the team - several days earlier Onyx had fired him, saying that he had issued a press release that had criticised the team.

"I was sacked," Gachot says. "It was very simple: Onyx was in a difficult situation because they didn't have

any money left. I had a very small salary, which was really no problem to pay. They consistently delayed payment, saying that they didn't have money. But all the directors of the company had paid themselves. So I said, 'Now I just want my money.' (Team owner Jean-Pierre) Van Rossem said to me, 'Look, I will give you a million dollars next year if you don't take your salary this year.'"

"I said, 'No, I want the money this year, I need it to live.' The next week I heard that I had done a press conference in Belgium criticising the team. In fact, I was in Portugal with my girlfriend. I didn't go to Belgium that week. There was a press release, but it said nothing bad at all. But they just used that to put me out."

Gachot threatened to put an injunction against the team. Van Rossem then gave him a letter promising severance pay, but the money never arrived.

So it was then that Gachot joined Coloni for the 1990 season. Despite the lack of success, the team spirit has kept everyone motivated.

"The team is not competitive," Gachot says, "but it is a Formula 1 team. I'm still here. And I have the opportunity to prove that I am doing a good job."

"Coloni try to do the best they can, but they don't have the means of doing a good job. A team like Ligier has 125 people. We are maybe 25 or 30. Formula One is just too complicated. Our mechanics are exhausted. Everyone is really pushing it. The only thing that keeps them going is that these people are real racing people. They will really try because they love motor racing, and they will eventually make it."

Gachot did manage to put in some time behind the wheel of a racing car this year when he drove at Le Mans with Mazda.

"It was a good experience," he says. "But Formula One takes a lot of time. When Subaru-Coloni signed the contract with me at the beginning of the year, they told me to be ready to do a lot of testing. But we never did it, so I have had a lot more time than I expected. But believe me, when you have to do



Early-season struggles in the Coloni-Subaru...

politics and the rest to survive, it takes more time than driving!"

Talking of driving and racing, Gachot says his best racing memories and experiences so far were in the lower formulae.

"I really enjoyed FF2000 and F3000," he says. "I haven't done much racing in Formula One. When you're at the bottom of Formula One, it's difficult to actually race, because you think, 'I drive for one hour and a half, two guys out of three will fall out with mechanical failures, and I need to get to the finish.' So, you don't drive the same way as when you're driving a Formula Ford for 25 minutes and all the guys have the same engine, same cars and the same tyres. That's good fun."

What does he drive on the road? "Like most Formula One drivers," Gachot says, "I have a 500 Mercedes. Usually, though, I drive an Alfa Romeo 164."

When he was at Onyx Gachot drove a Ferrari Testarossa... compliments of Van Rossem.

"I didn't use the Ferrari very much," Gachot says. "If you drive a Ferrari which is not yours, you don't feel happy in it. If you have a Ferrari because it's YOUR Ferrari, and you worked for it, and you're successful, it's okay. But when someone gives you a Ferrari and tells you to go and pose with it, it's no fun. The Testarossa is a big, heavy car, so you really can't go too fast."

Through all of his ups and downs, Gachot's best supporter has been his girlfriend Catherine Palmer.

"I used to never take a girlfriend to the races," Gachot says, but I actually met Kate at the races. She was working for Marlboro. She understands motor racing, and she knows when to help me and when she shouldn't bother me. She looks after the sponsors and the guests."

Palmer is British. Gachot's nationality? Well... "I have a French passport," he says. "I was born in Luxembourg. I have a German mother. And I live in England. I speak French, German, English and Italian. They call

me Belgian because I drive under a Belgian racing licence."

Gachot was speaking at the Belgian Grand Prix. It was a time of year when many drivers were trying to finalise seats for next year, and the lucky ones like Senna and Prost had already signed contracts. What were Gachot's thoughts for the 1991 season?

"I have a lot of plans and a lot of thoughts," he said. "I wish I could have the opportunity to do something good and again be in the limelight. That is what it is all about: getting good results and having people be convinced that you can do the job for them."

PE

... late-season struggles in the Coloni-Ford



"Women," mused Ivan Capelli with a smile. "They are a problem for racing drivers. A serious problem. It is a very difficult thing for us because of our job. I am not married and I don't think I can get married easily! Maybe later, but not now while I am racing."

"It is one of the hardest and most difficult parts of the job really because a lot of women are just not able to follow or understand the Formula One driver. Not because we are mad... but because our life is very hard. The travel, the hours, the work. It is hard for a woman and it is very hard to have a relationship."

Most long-range observers of Grand Prix racing might find it difficult to reconcile Capelli's plaintive cry with the popular image of drivers as playboy millionaires with a champagne lifestyle and girls in every pit-lane. But what Capelli is articulating is the serious side of life on the circuit, a year-round grind of endless travel, test sessions, races, public relations appearances and lonely hotel bedrooms.

For the Leyton House driver, disappointed this year at not being able to sustain a run of competitive performances, the problem is hidden away by his sheer professionalism, his talent, his tremendous sense of humour and his devoted and sup-

The Serious Side of Ivan Capelli

by
TIMOTHY COLLINGS

portive family. Much as his mother, on his own admission, would probably like to see him marry and settle down, Ivan knows his immediate future is wrapped up in Formula One and, despite ambitions to find a seat with a title-challenging top rank team like Ferrari or Williams, another year at Leyton House in 1991. He hopes, like everyone involved with the team, that the Ilmor 10-cylinder engine will

enable them to break out of the mid-grid cast next year and supply the 27-year-old Italian with a car capable of doing justice to his widely-admired talent.

Ambition and talent, however, are no guarantee of success for racing drivers unless they are accompanied by another even more crucial ingredient - luck. And in Ivan's case, for 1991 at least, it looks as if the Ferrari drive he dreamed of has passed him by with Jean Alesi obtaining the seat.

"It has not happened," he admitted. "Not yet. Ferrari told me to wait, like they told everyone. The situation was very difficult for such a long time with Mansell and Alesi. But they (Ferrari) told me that if there was another team asking to have my signature I should let them know..."

If there is disappointment in Capelli's voice, it is hard to discern it as he reviews the longest "silly season" in Formula One history. "I also talked to Williams, but then they went to try and sign Senna who is obviously the quickest man at the moment in Formula One. And then of course they had Alesi under contract too. But I have not said I wanted to leave Leyton House definitely. I just wanted freedom to look around."

"Really, I want to be with a team which will give me the possibility or the chance to challenge for the Championship, to be competitive,



Grand Prix start: Tyrrell, GP of Europe 1985

through all 16 races. Not just one race or two races like France and maybe Silverstone or like Portugal two years ago. It is not enough."

"After four years in Formula One, I think I am old enough and wise enough to have a chance to fight for the Championship and not compete only in two or three races a year. I want to be at the front for 16 races not one or two. I do not mean that Leyton House do not have the same ambitions and I know they have put together a good package for next year with the Ilmor V10. It is a great package. But I want to feel sure about it all."

Clearly, for Capelli, there is a strong feeling that he is now approaching the peak years of his career. If he cannot make a break now and become a title-chasing driver, he may soon be caught by the younger drivers entering Formula One every year, intent on setting the game alight just as he wanted to himself when he first arrived in 1987 after winning the International F3000 Championship the previous year.

It was in those early years that Ivan first showed the tremendous natural driving ability which had dictated the course of his career, luring him into Formula One and away from other sports after being tempted, as a youngster, to seriously examine his prospects as a professional footballer. Born in Milan on May 24, 1963, he grew up in a close family in which he was, and remains, influenced by his father Graziano. His first love was soccer and he plays regularly still during the winter off-season from motor racing.

"It is our only break," said Ivan. "I use it to follow my business interests

in Milan where there is a Leyton House office run by my father. I am the Vice-President of this office. Also, I hold 50 per cent of the shares in a BMW dealership with a good friend of mine. I love this work and I love the cars."

"I also like to keep busy in the winter keeping my body fit by play-

"I want to change team but only to one of the best, to win a Championship. It's the same with women for me."

Grand Prix finish: his best of 1990, 2nd in France



ing soccer, or tennis, jogging and skiing. Soccer is easily my favourite sport because I have always loved it."

"Between 10 and 14 I played for a team called Prosesto, from here near Monza, and we won the regional championship. I played left-winger and my heroes were Oleg Blokhin of the Soviet Union, Eder of Brazil and, of course, Gigi Riva. He was the greatest number 11 of Italy."

"But the problem for me was that I was, unfortunately, a little too small in comparison with the other players of my age. I know when I played against International or Milan, they had boys with moustaches or beards... It was very difficult. But everyone in Italy loves soccer and during the World Cup I watched all 54 of the matches on television except for four."

"I was in Milan when Italy played Argentina in the semi-final and lost. It was very, very, very, very sad. It was bad. The next day was the end of the World Cup for us and no-one talked about it any more. There was a huge reaction everywhere in Italy."

Fortunately for Ivan, his life revolves around cars and not soccer now and the day after Italy's defeat he was preparing to fly to Marseille and the French Grand Prix where he finished second, his best result of the year.

Racing cars had taken over from soccer in his imagination during the period he played for Prosesto. His father took him to Monza for the first time when he was 11 and this sparked off an interest in karts. At 14, he claimed the Junior National Championship and he was on the way in a career which saw him enter Formula Three in 1982, enjoying two success-





ful years with Enzo Coloni in Formula 3 in 1983 and 1984. Military service intervened briefly in 1985, but Ivan still managed to win at the Osterreicherung in Formula 3000 and was rewarded by an invitation to drive a Tyrrell-Renault in two end-of-year Formula One races. He responded by taking fourth place in Australia and launching his career.

The following year he won the Formula 3000 title in a Genoa Racing March and also ran in three Formula Two races in Japan, under the sponsorship of Akira Akagi of Leyton House who stayed with and backed him when he joined the revived March team in 1987. He has been with the team, now re-named Leyton House

following last year's takeover, ever since, enduring a mixture of acute frustration and joy with the team's continuing lack of consistency.

Frustration occasionally, of course, gets the better of him and that is when the absence of a close female companion can be most telling, as Ivan candidly admits. Asked if he had made an effort to stick to serious relationships only or to reject them in favour of only light-hearted romances, he replied: "Yes...I've tried both. Truly, I have. But, as I have said, there is a big stress for the woman either way. A lot of the time she has to be alone in the motor home or in the hotel.

"We talk a lot and travel a lot and there is not much time. And then after

all the travel you always arrive at the end and you are very tired. A driver can only give away a few hours in the evening and then he is completely tired out from the stress of the day. It is very difficult for the woman because you want her to help to recharge you but she wants that too.

"But at the same time, if you don't have the woman with you, you are missing something because everybody is taking from you all the time - the autographs, the pictures, the interviews, the questions and answers. They all want to know all about the car and everything. So, the woman and the relationship is left as the only private thing you have - if you have it.

"The driver feels he needs this kind of relationship because you need someone beside you. It gives you confidence and recharges you. This is a very big problem for the man, the driver, because it is so difficult to give anything back to the woman. It is all the other way. Taking and not giving in the relationship. The only way a woman can do this is to love you very much and for this you need a special kind of woman."

Ivan said he has had two serious relationships. One of his girlfriends was a model and the other was an actress. But both failed through the problems he has explained. "My ideal woman would be like them, but better for me," he said. "It is hard to say...Like cars, they must be better each time. I want to change team but only to one of the best, to win a championship. It is the same with women for me. I only want to have a relationship like this with someone who is special for me."

Such serious thoughts come as easily from Ivan Capelli as observations on his chassis settings or the performance of his tyres. If he was not a racing driver, he said, he would like to be a film camera-man, making movies and working in the media. His sister is a dancer and his father involved in photography and there is a strong sense of creativity in the Capelli clan of which Ivan is proud. It has helped him remain interested in many aspects of life outside motor racing and beyond the confines of Formula One. A funny man with a practical and often wild sense of humour, he also has a serious side - and ambitions to challenge for the world title.

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When you look into the pits and garages of a Formula One team these days it seems that they are overflowing with people wearing the team uniform. Yet although the garage seems to be filled wall-to-wall with the team's colours, it actually represents only the tip of the iceberg. Less than one-quarter of a Formula One team's personnel travels to each Grand Prix. The rest remain back at the factory which is far from the noise and glamour of a Grand Prix.

So how many people does it take to build and maintain two Formula One cars? In the case of Leyton House Racing the number is 137, and only about 30 of those travel to the races.

To get an idea of just what it takes (and costs) to field an F1 team we visited the Leyton House factory. Our tour was arranged by one of the team's sponsors, Phillips Car Stereo, and by Andrew Burslem. Our "tour guides" were Les Taggart, the Commercial Manager of Leyton House Racing, and Reg Connor, the General Manager of Leyton House Marketing.

The Leyton House factory is about one hour's drive north of London. Located in an industrial estate on the outskirts of Bicester, it's conveniently close to Silverstone. Right across the street is the Reynard factory, which will be fielding a Formula One team in 1992, and the Leyton House F3000 shop is nearby as well.

We meet in the conference room where Taggart explains to us that we can only take photos of certain things during our tour. Leyton House, like all Formula One teams, is very security-conscious.

The Leyton House Formula One team has grown three times in size since 1988. In about 12 months the team plans to move into a larger factory in the same area.

Our first stop is the drawing office where about 15 designers and engineers work, under the direction of design director Chris Murphy. Needless to say, close-up photos were not allowed of the plans on the drawing boards!

Next door to the drawing office is a room which stores the front and rear wings required for different circuits. Each front/nose wing costs £10,000. Think about that next time you see

Works Outing: The Leyton House Factory

by
DAN KNUTSON

a driver crunch his car's nose during a race. And with an all-new aerodynamic package on the 1991 car, the wings used in 1990 will be useless.

Next we visit the electronics section where the telemetry system is developed and maintained and other electronic components are built. From there we go to the Cad/Cam computer

room. The £750,000 system lets the designers design an entire car in the form of a computer model. They can also experiment with different designs and ideas. When we are there, for example, the computer has an image of the new Ilmor V10 engine and transverse gearbox (which the team will run next year) fitted into the 1990 car. The computer makes things easier for the designers. Recently, for example, they realised that the engine in next year's car will have to be 21mm higher than the plans had called for. All it took was pushing a few buttons and the 'new design' appeared on the computer screen.

Leyton House manufactures many of its race car parts 'in house'. For example, the team machines its own rear suspension uprights and hubs, but the gearbox case is manufactured by another company. From a strict business point of view, building parts in house isn't economical because the machines aren't running 24 hours a day as they would be in a regular factory. But it does mean that Leyton House can have the parts when it needs them and doesn't have to worry about the schedules and quality from an outside contractor.

Ten years ago the race mechanics used to rebuild parts of the car such as the gearboxes themselves. Now factory-based mechanics rebuild and repair everything, so the race mechanics merely need to install the fresh parts. This division of labour is one reason why Formula One teams have grown so large in recent years.

Everyone is paid a monthly salary, not a per-hour wage. While the factory tries to maintain regular working hours, a shift can stretch late into the night at times.

Now the tour takes us to the race shop, a large area where the race cars are worked on between races. The team has four cars - two race cars, a spare and a test car. The two Leyton House transporters are parked just outside, and the cars can unload directly into the race shop. Here we see many familiar faces because the mechanics are the same people who travel to all the Grand Prix events. Three mechanics are assigned to each of the three cars. Each truck has two drivers, and

between races they make sure that the trailers are re-stocked with all the spares and equipment needed for the next GP.

The mechanics usually fly home on the Sunday night after the European Grands Prix. They have one or two days off before the trucks arrive back at the factory. The mechanics then work at the factory until the trucks leave on the Monday or Tuesday before the next race. After another day or two off, the mechanics fly to the track on the Thursday before the next GP. Leyton House bought 26 V8 Judd engines for £58,000 each, and they are sent back to Judd for rebuilds. The team takes 10 engines to each race while the other 16 are in a rebuilding rotation sequence. Each rebuild costs £15,000.

Off to one side of the shop are the undertrays which have been taken off the cars. These are not simple "floors" for the cars: they create some 80% of the car's downforce and cost £10,000 each. They take such a beating that a new undertray must often be fitted for each race.

After two or three races the bodywork is stripped and repainted. The body parts are then weighed to ensure that too much paint wasn't applied: extra paint means extra weight.

Next we visit the fabrication and welding shop where many other "metal" parts are built. Perhaps a better word than "built" would be "created", for here we witness true works of art being formed.

The area contains a machine which is used to test suspension. You fit the suspension to it and the machine will simulate the braking and cornering loads that will occur on the track. Another machine performs a similar function for the dampers.

Here we also see new radiators being prepared for installation. These are built outside the factory and then modified by Leyton House. The radiators are replaced after two races because the cooling fins eventually become bent, and that means the cars will run 10 to 15 degrees hotter.

Next we visit the inspection area. Everything is "100% inspected" before it's installed on the cars. Machines that can measure parts within a tiny fraction of a millimetre are used to ensure that all the parts meet exact specifications. After a race the suspension parts are tested for cracks using an electronic crack testing procedure known as Zygo or Magniflux.

The suspension, like all parts on the car, has a "life". After a certain period - which varies for each part - the part is replaced with a new one



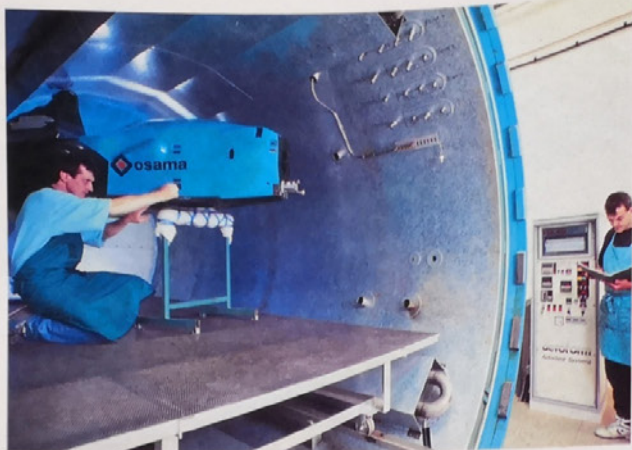
Back to the drawing board!



Carbon fibre moulds in the composite shop

Craftsman at work on gearbox assembly





Hot stuff: "baking" carbon fibre parts in the autoclave

Monarch of all he surveys: popular LH team boss Ian Phillips



even if the old piece is still perfect. The suspension pieces are used for two races and then thrown away.

From the inspection area we go on to the machine shop. Again we see works of art being created. There's something fascinating about watching a piece of a race car being machined out of a hunk of steel. For example, the large wheel nuts are built here, and it takes 60 minutes of machining to build each one.

We also visit the carbon fibre shop where the monocoques, undertrays and other carbon fibre parts are built. It costs £40,000 to build a mould for the carbon fibre monocoques.

Across the street from the main factory is another building which houses the large autoclave. This £205,000 giant oven is used to "bake" parts made of carbon fibre. When we are there a rear wing section is being baked. It had to be inside the autoclave for one hour at 70°C and then for one and a half hours at 130°C. The autoclave is also pressurized - by increasing the air pressure, you can further compact the carbon fibre by pushing out any trapped air bubbles.

Leyton House also has its own tunnel facility which is located about 16km from the main factory. On our way to the wind tunnel we stop off for lunch at an excellent Italian restaurant. Apparently the people from Leyton House often eat here as the waiter points out the favourite desserts of Ivan Capelli, Mauricio Gugelmin and Ian Phillips!

The wind tunnel fills the entire building. These days it's as important to know how the air moves under the car as over it - so the wind tunnel has a moving floor which can simulate speeds of 160 km/h.

It is much too expensive to have a wind tunnel large enough to test a full size car, so most wind tunnels use scale models. The Leyton House tunnel can use models that are .4 or .5 scale. It takes five months to build a model at a cost of £75,000. The model, however, is made in sections, so various parts can be changed without having to build a new model. The monthly electrical bill to run the tunnel is £2,000.

From the wind tunnel we head back to the main factory where our tour ends. Next time we see Ivan Capelli and Mauricio Gugelmin flash past in their Leyton House Judds, we will have a better appreciation of just what it took to put those two cars out on the track.

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Stuart Turner is the director responsible for Ford of Europe's motorsport activities and he admits that he has strong feelings about Formula One. "My job," he explained in a recent interview, "involves everything but Grand Prix racing, for which I often kneel by my bed and thank God."

A master of the withering tongue-in-cheek remark, Turner has frequently used his refreshingly cynical views on Formula One and its precious habits to illuminate many a brilliant after-dinner speech. But, that said, motor sport remains a passionate interest and, if Grand Prix racing were to run into hard times, Turner would be the first to recognise the detrimental effect this would have on the sport as a whole. He does not hesitate, therefore, to voice concern over the apparent lack of interest shown by Formula One in matters of the environment.

In that same interview with Phil Llewellyn, published in *The Independent* last September, Turner said: "No matter what type of motor sport you are into, you can't afford to be anything other than very aware of the environmental considerations."

Turner was alarmed, but scarcely surprised, to discover that a recent

Fuel for Thought: Is Formula 1 Environmentally Unsound?

by
MAURICE HAMILTON

motor rally in Germany was badly disrupted by the Greens invading a special stage. How long, he asks, will it be before the environmentalists see Grand Prix racing as a very public platform for their cause? The starting grid of any Grand Prix, with the cam-

eras of 30 and more nations focused upon it, would provide the perfect setting for a surprise demonstration.

Of course, we know that Grand Prix racing is not as anti-social as its critics might believe but, in the event of attention being focused upon it, would it not be better for the sport to be seen to be doing something positive? That, at least, was the gist of a letter sent in July by the Ford Motor Company in Detroit to Jean-Marie Balestre.

Ford outlined their view that Grand Prix racing is in danger of losing its direction at the expense of the ecological programmes being favoured by the motor industry in general. Ford also claimed that the quest for out-and-out horsepower, the ultimate aim of Grand Prix engine manufacturers at present, may eventually bring Formula One into disrepute at a time when the rest of the world is placing greater emphasis on fuel efficiency and environmental sensitivity.

As we go to press, Ford, to our knowledge, have not received a reply from President Balestre. But Lou Lataif, president of Ford's European division, and Alan Gilmour from Ford's HQ in Detroit, visited the Hungarian Grand Prix to discuss their



(LAW)

concerns with Bernie Ecclestone. Doubtless they chose their words carefully when mentioning the environment since Camel had chosen that weekend to announce a major sponsorship package with Benetton-Ford. That, say Ford, was purely a commercial decision made by Benetton. In an interview with Mark Fogarty in *USA Today*, Gilmour said: "Smoking is an individual decision. It's not a decision for the whole world, like ecology."

Nonetheless, the Formula One sceptics dug deep for an ulterior motive. It was the same when John Barnard weighed in with a highly contentious argument over the fuels currently being used in Grand Prix racing.

According to Barnard, technical director of Benetton-Ford, Formula One is racing blindly into an area of development which may be environmentally unsound. Barnard says not enough is known about the special fuels which the teams are using in this relentless pursuit of engine power.

Barnard's use of phrases such as 'fairly anti-social stuff', and a reference to mechanics' skin being left 'red-raw' after contact with fuel, drew an instant reaction from Shell, suppliers to McLaren-Honda. In a press release issued at the British Grand Prix, Shell said: 'We agree wholeheartedly that Formula One cannot ignore today's concerns with the environment....Shell Formula One fuels and lubricants contain constituents which are found in products used in day-to-day motoring and we can confirm that the fuels and lubricants used at Honda

Marlboro McLaren require no additional precautions to those recommended for the handling and use of normal consumer fuels.'

BP took the matter a stage further. Journalists were invited to their research headquarters in Sunbury where Gus Reid, the research coordinator, did not mince his words. "We test the fuels here and, if they were dangerous, we wouldn't be allowed to test them here," says Reid. "It wouldn't be our decision either. This site is subject to very strict international criteria of safety standards. If we overstep the mark, then they could close us down; simple as that."

Certainly, when you visit the Sunbury centre, safety is very much to the fore almost, it seems to the outsider, to a pedantic degree. But this is not superficial window-dressing for the visitor. Safety is a way of life - which is why Reid blanches when he recalls some of the methods used in the pit lane.

"The things they do in Formula One would not be tolerated anywhere in our industry. For a start, there should be no smoking anywhere near the pit lane or in the garages. And the

*"The things they do
in Formula One
would not be
tolerated anywhere
in our industry."*



(LAW)



(LAW)

ventilation in the garages is not good, not good at all. With regard to these complaints about the handling of the fuel, there is no health risk if the fuel is handled in the recommended manner. That's exactly the same as it is for any forecourt staff in everyday business."

BP also refute Barnard's comments that their racing fuel contains special additives. "Not so," says Peter Histon, the fuels manager at BP. "There is nothing in our race fuel that doesn't appear in our commercial products and, furthermore, BP's racing fuel compares with a typical four star on emissions." Histon points out that there are over 123 constituents in gasoline. There are no additives necessary because the key factor is knowing how to mix these components in order to give the Formula One engine manufacturers what they want.

But John Barnard sees the use of special fuels as an unwelcome effect of regulations which he feels are to the detriment of the racing itself. He draws a comparison with the final years of turbocharged engines. "At that time, we were getting to the point where, unless you had a turbo engine backed up by an enormous research and development programme, you had no chance whatsoever; you were in a different league. Okay, it was technology at a high level but it wasn't good racing and I think the declining spectator figures reflected that."

"So, they banned turbos. But now another new avenue has been allowed to develop - unlimited fuel consumption and the wide open technical



(LAW)

specification of the fuel itself. This has led to these special fuels and is the way you have to go if you want the most powerful engine. And, once again, that boils down to the people who can afford the biggest research and development departments being able to command what fuel they want.

"I think the fuel should be carefully regulated," Barnard goes on. "If anything, we should be using fuel that's more 'green' than the fuel you can buy at the pumps. So long as we all have to do it, then it is not going to hit one manufacturer in particular.

"Agreed, you can never prevent people with enormous budgets from leaving the rest behind; but this would bring the teams closer together in terms of performance; that's what the ban on turbos was supposed to do." It is no coincidence that Ford are putting forward a similar argument since they work closely with Benetton. Such claims are guaranteed to stir up moral indignation in the paddock.

How dare anyone attempt to muzzle maximum performance, the high altar of Formula One, and blunt what is considered to be the leading edge of automotive technology? Ford's apparent altruistic concern is bound to be viewed with deep suspicion. What's in it for them?

"As a motor manufacturer, we feel that simply chasing power is not in

line with today's world," said Michael Kranefuss, head of Ford's Special Vehicle Operations. "At the moment, Grand Prix racing is encouraging the development of engines which are inconsistent with the demands of society and the automotive industry.

"Grand Prix racing can't simply stand on an island and say all we want is brute power and sod the rest of you."

"There is a greater motor industry involvement in Formula One today than ever before - and it is by no means all for publicity. It gives us a chance to engage our engineers in advanced technology projects at a pace which can never be found outside motor racing.

"In this respect," Kranefuss goes on, "Formula One has been of great benefit to us and our customers, both in terms of product improvement and in the development of equipment, some of which is already being made

available to dealers, for monitoring performance more accurately.

"But times change, and with much of the world so deeply concerned with environmental issues, and with the motor industry so heavily committed to this cause, I believe that FISA has a magnificent opportunity to point us all in a new direction, one which is more compatible with the demands of an environmentally conscious society."

That may be so, but what about the present situation in Formula One? In the season so far, the 10- and 12-cylinder engines have dominated the results. Surely, then, it is also no coincidence that the Ford engine has a mere eight cylinders? Cynics will say this is the motivating force behind what could be interpreted as a claim that the more powerful 10- and 12-cylinder engines are anti-social.

"Not at all," Kranefuss says. "Yes, we do have a V8 engine at the moment - but we are not committed to that concept. We have been looking at 10- and 12-cylinder engines for some time now. What we are saying is that there should be a new challenge - to develop cars of outstanding efficiency judged not just by engine or chassis, but as an overall package. Smaller cars, lighter cars, cars which are just as quick but consume less fuel." Although he would not comment on the fact, it is

believed that an initial informal approach by Kranefuss to Renault and Honda met with a cool response. But that may change if this swing towards environmental issues gathers momentum.

Certainly, a McLaren spokesman confirmed that the need to be seen to be environmentally concerned was ever-present and any moves made to that end, after due consultation with everyone concerned, ought to be encouraged.

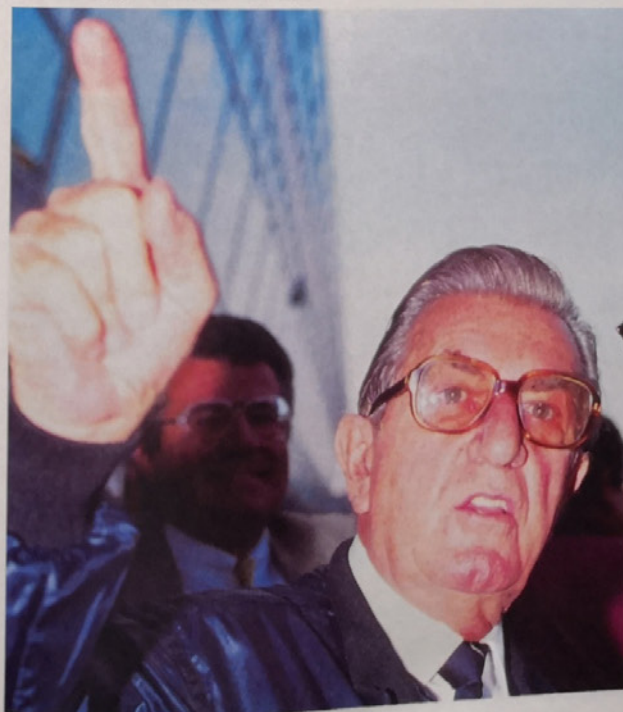
Barnard also has strong views on the question of angling Grand Prix racing towards fuel economy. "We should be looking at efficiency rather than brute force. We should be saying, here's your maximum amount of fuel, now let's see who can get the best performance from that. We simply can't afford to be seen to be building engines which are not efficient.

"And I don't think the excuse is relevant that a fuel consumption formula is a bad thing. People will point to the turbos running out of fuel and that can't be denied. But look at the fantastic strides that brought with engine management and the fact remains that, even today, it is a fuel consumption formula of sorts because



Key figures in the debate: a concerned John Barnard...

... and the man laying down the law, Jean-Marie Balestre



each team will put as little fuel into the car as they think they can get away with.

"As for your argument that Ford are only saying this because they have a V8, we don't know which engine configuration will be best when it comes to fuel efficiency. If power is the ultimate demand, then you have to say a 12-cylinder engine is best. But if you are looking for more power from less fuel, it becomes a more difficult and complex technical decision. And that, surely, is what Formula One is supposed to be all about.

"But we can't just ignore the fact that the world around us is talking ecology. Grand Prix racing can't simply stand on an island and say all we want is brute power and sod the rest of you."

Stuart Turner, however, issues a final note of caution. "We must keep in step with the rest of the world regarding the environment," he says. "But it's equally important not to over-react. For instance, you could prove that fishing actually uses far more petrol than motor sport because there are literally millions of anglers. But the problem is, nobody would believe you."

Green surroundings - but is Grand Prix racing a Green sport?



It was an uncharacteristic start to the World Championship - Silverstone was warm and sunny. On May 13, 1950, the most colourful sport spawned by the twentieth century gained official status when 21 cars assembled on the starting grid at a former RAF airbase in Northamptonshire.

In the presence of Their Majesties King George VI and Queen Elizabeth, the 1950 British Grand Prix inaugurated an annual sporting spectacle that has since spread to almost every continent, visited over 20 countries and generated a global television audience now numbered in billions.

And this year Adelaide - a mere 10,000 miles or so from Silverstone - will stage the 500th race in World Championship history. From the flat fields of England to the streets and parklands of South Australia's lovely capital, Formula 1 has indeed come a long way - and never will a Grand Prix have been staged in quite this way!

"Roar Energy" has been the theme of this year's Australian Grand Prix build-up, and as always, the Adelaide organisers have laid on a gourmet menu to please anyone with an appetite for motor racing. From aperitifs like the spectacular parade to the landmark Eagle on the Hill hotel to the main course itself - the 500th race - there is a four-day feast in store, and

500 Times But Never Quite This Way

by
STUART SYKES

a programme that may give food for thought to recent arrivals on the Formula 1 scene, like Phoenix, or those with ambitions to join the list of Grand Prix venues.

Adelaide 1990 will be a blend of the old and the new, where both men and machinery are concerned. The Alfa-Romeo Tipo 158/9 that won the first-ever World Championship

Grand Prix will be specially air-freighted to Australia to head the parade of historic Formula 1 cars, a pageant taking in the whole of Grand Prix racing's development over four decades.

And the greatest driver of them all, Juan Manuel Fangio, will be on hand as one of a host of former World Champions gracing the Adelaide event. Fangio will take the wheel of the equally legendary Mercedes-Benz W196 that made him virtually unbeatable in the mid-50's, while his arch-rival of those days, Stirling Moss, will also be on the track.

Australian followers of Grand Prix racing, who have every right to feel slightly isolated from events at the European heart of the season, are thrilled to have one of their number back in a Formula 1 cockpit - and David Brabham is looking forward to the chance to show them what he can do. Reflecting on a trying first year at the pinnacle of the sport, David makes no bones about it: "Formula One is bloody hard work. Drivers don't get to see much of the glamorous side of it all because they're busy working, either driving the car, sitting in meetings with the engineers, or making adjustments to the car."

No glamour - but what about the stars? "The big thing about a first year in F1", David goes on, "is that you are sharing the track with the great names

- Prost, Senna, Mansell, Berger, Piquet and so on. But after a few races you realise that you're all in the same game and it's a tremendously levelling feeling. I'm not in a position to beat those guys yet and I have a huge amount of respect for them. That means only one thing to a racing driver - I want to beat them. There's no doubt that Formula 1 is the pinnacle of motor sport. It's where I've always wanted to be, and where I intend to stay."

David has already made his own private piece of history this year, as the first son of a former World Champion to take part in a Grand Prix. That he should have done so in the very team his famous father founded is all the more remarkable, and his will be a hero's welcome in Adelaide, no matter how he fares when the real action begins.

Before it does, vehicles of all sorts - the world's only 180 km/h backhoe, pedal-powered phenomena capable of 60 km/h, buses, motor-bikes - will have shared the Adelaide circuit with some of Australia's top athletes, Olympic cyclists and basketballers, Aussie rules footballers, celebrities in a special BMW challenge: you name them, they'll all be there, while the skies echo to what has also become the biggest air display in Australia.

As if that were not enough, someone in the Australian Grand Prix Office has had the brainwave of this year and most of the previous 39: "dessert", on this unrivalled bill of fare, is the premiere of Cher's Australian tour. One of the world's most dynamic singers will bring her own brand of "Roar Energy" to a specially-constructed stage in the confines of the Adelaide circuit for a concert that is free to all patrons of the Grand Prix itself. Entrepreneurial thinking, if ever Formula 1 saw it - and the perfect way to link the "serious" business of motor sport to leisure activities that must appeal to a younger generation. Though there will be a few mature men in the fight for the front of the grid before that particular event...

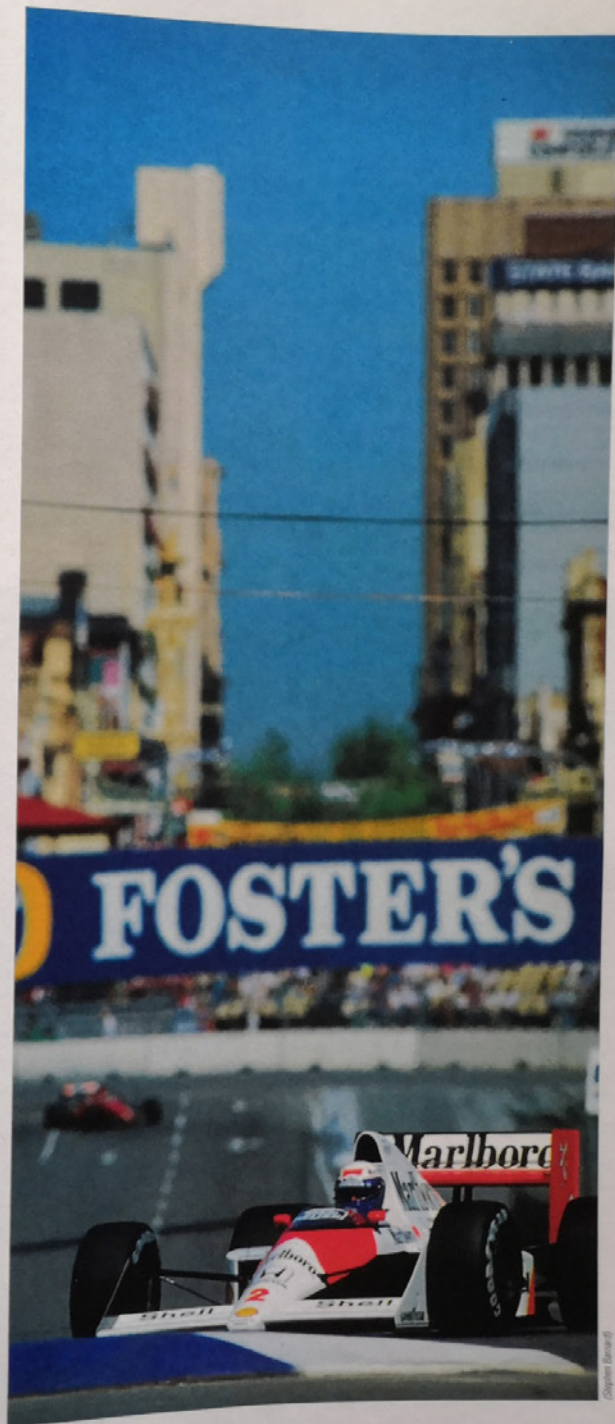
Adelaide 1990, then, will be the greatest celebration in the history of Formula 1 - not bad for a city that has already established itself as a favourite with everyone involved in Grand Prix racing. Australia may have recently lost the Olympics to Atlanta - but that city, if it is serious in its intention of staging its own Grand Prix, would do well to watch what happens in Adelaide, and see how Grand Prix racing, 500 races on, should really be done.

PE

Two faces of Adelaide: Boutsen's brilliant victory in the wet... and (opposite) the more familiar South Australian sunshine



Australian Grand Prix (Barry)



Colin Brown (8)

Ferrari, the legendary red racing car, has long been associated with Italy. It symbolises so much of that nation's character, its fascination with speed, its cult of heroes, the thrills of danger and victory. All drivers want to have a drive in a Ferrari Formula One car. Nigel Mansell explained why the magic endures: "I wanted to tell my grandchildren that I once drove for Ferrari. It's every child's dream."

But if Maranello, in the Emilia Romagna region of Italy, is the company's headquarters, there is also a small company tucked away in Surrey which has become a vital part of the Scuderia's campaign to wrestle the World Championship title away from McLaren and their Japanese allies. GTO stands for Guilford Technical Office. It was conceived by John Barnard soon after he was headhunted by Ferrari. At first there was a lot of resistance to the idea of a separate centre in another country. Ferrari has always prided itself on doing everything in house. In the end Enzo Ferrari had to intervene. "Is he really as good as they say? Is he the best? Then give him what he wants. Damn pride, I want victories!"

And so GTO was born. But it is a very discreet outpost of the Ferrari empire. The only clue that this is not just another British company in modern red brick premises is the fact that the receptionist would smoothly switch from English to Italian while juggling phones and visitors. And there is a discreet rampant horse, Ferrari's symbol, on the wall behind her. But that is it.

Peter Windsor is in charge of GTO. A former journalist, he was involved in Brabham and Williams before being asked by Ferrari to run GTO. It was November last year, Barnard had left Ferrari, and had tried to negotiate GTO away from the Italians. He failed but half of the workforce followed him to Benetton. Windsor had no time to worry: Maranello wanted four cars built in time for the Phoenix Grand Prix in March.

"Yes," explained Windsor. "We build everything here, except for the engine, the gearbox and the bodywork. Tyres and wheels are bought in, but we make everything else. You could say that the car is Made in England and that the engine is Made in Italy." "Everything else" is a lot. Windsor estimates that in terms of area, 65% of the car will have been made at GTO. A Ferrari Made in England, how is that possible? "Since the days of Cooper and Brabham, the hard edge of British motor racing has

been based in this area. Tyrrell and McLaren are down the road. And over the years the skills have developed like nowhere else in the world. We British are especially good at the old-fashioned skills of metalwork and the futuristic ability to mould composite materials."

It takes from 20 to 40 hours to make an upright. It is done entirely by hand. The fabricator cuts, shapes, welds. Machines do very little, and "the English are the very best in the world at this," says Windsor. One of the criticisms levelled at Barnard was that he was keen not to share this British experience with the Italians. "Not true," says Windsor. "People were coming and going all the time he was in charge. Now we have two Italians here on a 12-month stint, and others who visit us for two-month periods. But it is hard for fabricators to impart their knowledge. We are talking 20 years of experience."

The composite area of GTO is high-tech indeed. People wearing the kind of protective clothing normally associated with the nuclear industry are working in a sterile environment. "About 80% of our people here come from the aerospace industry, Marconi, British Aerospace, Augusta. This is the most interesting department at GTO, because it's always breaking new ground. Since Barnard left, we've added one more test laboratory to the one he set up," says Windsor. GTO has recently been given the brief to develop a stronger and lighter front section of the chassis. Already they make the nose cones, a number of which were stacked in a corner of the metal shop. "But we are not a live show here, just a technical office. Though when the guys see a Ferrari win a race they are justly proud, because that is the chassis they built, and the suspension, and all the other bits. Windsor himself gets quite ani-

mated when he explains that when Prost shunted his car in practice at Monaco, it was GTO who fixed it. "We received it on the Tuesday, and by Sunday it was back at Maranello, ready for the Canadian Grand Prix. We are proud of being part of Ferrari, and that episode showed we could deliver as well as anybody." But what about Fiat, owners of Ferrari, what sort of relationship did he have with them? "We are Fiat employees. We have a very tight budget to keep, and they have ferocious accountants. Their research facilities are fantastic, and more and more people from Turin are working at Ferrari."

Windsor felt that like Honda, who in moments of crisis can call upon 1,300 people to work on Formula One, Fiat will aim to do the same. But won't this affect the future of GTO as the leading technological outpost of the company? "Barnard convinced them that some things are best made in

England. They have accepted that. Now the cars we build, the 641 model, are winning races. Fiat are no fools, and though there may be some people who would like to see the back of us, Fiat will resist that. They are a conservative company, it would be hard for them to close GTO. After all, if it ain't broke, don't fix it."

Made in England: The Ferrari- GTO Story

by
NORMAN HOWELL



Few people realised it at the time, but the entry of a 1.5-litre turbocharged Renault in the 1977 British Grand Prix was to have dramatic repercussions in the following decade. Every other car in the race had a naturally-aspirated 3-litre engine, most of which came from one supplier, Cosworth.

Among those most intrigued by the arrival of the Renault was Keith Duckworth, the designer of the Ford-financed Cosworth DFV engine which had dominated Grand Prix racing for the past decade. Renault claimed that their little V6 gave 510 bhp, slightly more than the best DFV, but Duckworth could not see the point of turbocharging such a small engine when the rules allowed the use of a naturally-aspirated unit of double the capacity.

The bare facts of the Renault turbo's debut were that it qualified twelfth, made a poor start, never got above sixteenth and retired after 16 laps with turbocharger failure. All the interest was in James Hunt's easy win in the McLaren-Cosworth after John Watson's Brabham-Alfa retired with a fuel feed problem; few people gave a second thought to the potential of Jabouille's Renault.

Having missed two races the Renault reappeared at Zandvoort in August and ran as high as sixth before retiring with suspension trouble. It was less competitive at Monza, where it retired with engine failure, and at a

Dawn of an era: Jabouille gives Renault their first turbo victory, Dijon 1979



Formula One History: 1978 - 1988 The Turbo Era

by
DAVID PHIPPS

wet Watkins Glen, and at Mosport it did not even qualify; perhaps those who had laughed at it at Silverstone were right.

It certainly looked as if they were right for most of 1978, when the Renault was repeatedly let down by its engine, but at Watkins Glen in October it held on to finish fourth and at Dijon in July 1979 Jabouille brought Renault their first win, from pole position, with Arnoux confirming that

this was no fluke by finishing third after a last-lap duel with Villeneuve's Ferrari.

When Arnoux finished second at Silverstone and Jabouille took pole again at Hockenheim it became obvious that turbocharging had to be taken seriously. But while Ferrari and others quickly set about designing turbo engines, the majority of British constructors - mindful of the cost involved - tried to find ways of getting turbos banned; their main argument was that the 1.5-litre "supercharged" clause had only been added to the Formula 1 rules in 1965 in case there were not enough 3-litre naturally aspirated engines for 1966, and should have been rescinded as soon as these fears proved groundless. In addition, the British teams (plus Ligier) were far too busy trying to find more underbody downforce in the wake of the aerodynamic revolution initiated by the Lotus 79, and did not need more variables to confuse the equation; the well-tried bolt-on DFV was ideally suited to ground effects, and had shown over and over again that in the right package it was more than a match for significantly more powerful engines like the Ferrari flat-12.

Although Lotus had initially discovered ground effects almost by mistake, the benefits were so great that Lotus completely dominated Formula 1 in 1978, despite the vaunted 79 having major limitations in some other respects. Six wins for Andretti

and two for Peterson brought a runaway victory in the Constructors' Championship, but then Peterson (back in a 78 following a practice crash) was killed at Monza.

Of the many copies of the Lotus 79, Ligier's was initially the most successful, winning three of the first five races of 1979. The Williams version later won five, four of them going to Alan Jones, but by the end of the year the semi-ground effects Ferrari had won six races and the Constructors' Championship; Scheckter and Villeneuve both had three wins, and Scheckter was World Champion.

1980 was Williams' year with six wins, five of them by World Champion Jones - who also won the "pirate" race, in which only FOCA teams competed, at Jarama; the latter, of course, was symptomatic of the motor racing politics of the period...

Protracted arguments about the safety of cars whose cornering speeds had increased dramatically, together with counter-attacks regarding the need for or validity of turbocharging, led to the early 80's becoming one of the most acrimonious periods in the history of Grand Prix racing. Innovative cars were banned, and rules regarding aerodynamic aids were "clarified" every few weeks, but nothing (quite rightly) was done about turbocharging. The rules allowed it, engine builders found it offered them a technological challenge, and - most important of all - major manufacturers, many of them with turbocharged road cars under development, began to take an interest in it. With a little over 500 bhp being the maximum output at that time of a 3-litre naturally aspirated engine, and with 1.5-litre turbocharged units already giving considerably more (albeit with high fuel consumption and poor throttle response) there really was only one way to go. And while some British constructors dug their toes in and carried on using the DFV until 1984 (or in one case 1985), the more astute began to make other arrangements.

Not surprisingly, the first team to follow Renault's lead and race a turbocharged engine was Ferrari, who experimented briefly with Brown Boveri's unique "Comprex" supercharging system before settling for exhaust gas-driven compressors for their 120° V6.

The Ferrari turbo first appeared at Imola in September 1980 during practice for the Italian Grand Prix, and was immediately quicker than the flat-12, but was not raced until the start of 1981 - and even then its obvious power advantage was largely negated by



Scheckter at Zolder in his 1979 World Championship year

handling which was markedly inferior to that of the leading Cosworth-powered cars. Nevertheless, Gilles Villeneuve contrived to win at both Monaco and Jarama, and he and Pironi also ran strongly in several other races; the Ferrari turbo undoubtedly had arrived.

Meanwhile Renault had not been sitting still; having finally won Le Mans in 1978 they put all their efforts into Formula 1 and rapidly improved both the reliability and driveability of their engine. In 1979 the original Garrett production turbocharger, a major reason for poor throttle response and poor start-line performance, was replaced by two smaller

**"... light, nimble cars
still had the edge on
some circuits, but
their days were
numbered!"**

KKK units, and in 1980 the much-improved EF2 engine featured Nikasil coated cylinders rather than steel liners in the interest of heat rejection. As a result, they followed their maiden 1979 victory with three wins in 1980 (Brazil, South Africa and Austria) and three more in 1981 (France, Holland and Italy), the 1981 victories all going to new recruit Alain Prost. 1981 also saw the arrival of the BMW and Hart 4-cylinder turbos; the former, fitted in a Brabham, appeared only during practice at Silverstone, where its time

was quick enough for fourth place on the grid; the latter was fitted in the Toleman, a car which rarely qualified.

The BMW engine, with its production-based cast iron block, appeared more regularly in 1982 and became one of the year's turbo winners, along with Renault (four) and Ferrari (three), but the venerable Cosworth still won half of the races and a Cosworth driver, Keke Rosberg, became World Champion; light, nimble cars still had the edge on some circuits, but their days were numbered!

1983 was the first year of complete turbo dominance, with Ferrari, Renault and BMW engines all winning four races, and the remaining three going to Cosworth-powered cars; Alboreto's win in the Tyrrell at Detroit was the 155th and last for the DFV/DFV, a record which is unlikely ever to be broken.

There were three newcomers to the turbo scene in 1983. Alfa Romeo raced their thirsty, mechanically injected V8 throughout the year and were rewarded with two second places. The TAG-funded Porsche V6 appeared in the last four races of the season, fitted in the McLaren of Niki Lauda and John Watson, and showed promise but did not score any points. And the 80° Honda V6 made a very low key debut at Silverstone in Stefan Johansson's Spirit; after six races, in which its best result was seventh, it reappeared in Keke Rosberg's Williams at the South African Grand Prix and finished fifth.

Another new development in 1983 was the use of Renault engines in



Turbo titans: the BMW engine of 1982

other chassis, in this case Lotus; initially this was not a very successful alliance, but in the second half of the season Nigel Mansell managed a fourth and then a third to give the team hope for the future. By now Renault had an alloy block and an advanced management system, and had reverted to Garrett turbochargers, the latter now built to racing tolerances and available - like many other things developed by Renault - to everyone else.

In 1984, for the first time, some limitation was imposed on the performance of turbo engines; fuel tank capacity was limited to 220 litres, and mid-race refuelling was banned. The latter provision, ostensibly made in the interests of safety - like most F1 rules - had a considerable influence on the race performance of turbo cars, forcing them to start with full tanks on hard tyres rather than on half tanks with relatively soft tyres, as in the latter part of 1983; it also resulted in engines being made more efficient, as it was no longer practical to use fuel as a coolant; teams were, of course, still able to demonstrate their new-found ability to change all four wheels in around seven seconds, but the new regulations did nothing at all about restricting power outputs during qualifying.

By 1984 all the front-running teams had turbo engines, and the output of these engines had increased dramatically; Renault and TAG were both (probably conservatively) claiming

750 bhp at 11,500 rpm, and BMW quoted 850 bhp at 11,000 rpm for their 4-cylinder. But even at this stage it was generally thought that the BMW was producing even more during qualifying, and it was not long before BMW boost pressures of 5.5-bar and outputs of over 1200 bhp became commonplace, though only for very limited periods! In addition, the leading teams found that on race days it was possible to get an extra 12-13 litres of fuel into their tanks by super-cooling it - a procedure which was immediately frowned on and subsequently banned!

Whatever their reservations about its performance in 1983, McLaren and TAG were soon reassured about their investment in the Porsche turbo. In 1984, helped greatly by its Bosch Motronic management system, it won twelve of the sixteen races and enabled Lauda and Prost to finish 1-2 in the World Championship; Piquet's Brabham-BMW won two races and started from pole position nine times; the other two winners were Alboreto's Ferrari and Rosberg's Williams-Honda.

In 1984 the turbo engine builders were busier than ever. Renault supplied Ligier as well as Lotus and their own team, BMW took on Arrows and ATS as well as Brabham, Hart expanded to RAM and Spirit as well as Toleman, and Alfa Romeo powered Osella as well as themselves.

The TAG-Porsche, of course, was exclusive to McLaren, and at this stage Honda had their hands full supplying Williams - and trying to placate drivers who spoke of brutal throttle response as well as difficult handling; in some ways it seemed appropriate that the Williams-Honda's only win of 1984 came at the Dallas circuit and was due almost entirely to the inspired driving of Keke Rosberg.

By mid-1985 the behaviour of both the Honda engine and the Williams chassis had substantially improved, enabling the team to win four races and close the gap on McLaren-TAG, who won six. (On the road McLaren won seven races, but at Imola Prost's car was disqualified for being 1.8 kg underweight as a result of using too much of its oil, tyres and brake pads - Formula 1 really had become that close at the top!) Lotus (three), Ferrari (two) and Brabham (one) were the only other race winners; at the end of the year Renault gave up being F1 entrants but continued as engine suppliers - now to Lotus, Ligier and Tyrrell.

Honda's biggest step forward on the engine front came in Canada, and although reliability was a problem in

some mid-season races Williams ended the year on a high note with three successive victories. From now on it would be Honda which set the standard as far as engine output was concerned; already they had well over 1000 bhp for qualifying, and on occasions they were racing with over 900 bhp!

For 1986 the rules changed again, fuel capacity being reduced to 195 litres - a race power-restricting measure whose severity was partially overcome by the ingenuity of the fuel companies, whose high specific gravity blends permitted increases in compression ratio which improved power output as well as reducing consumption. And though no serious team would have considered using them, naturally-aspirated engines were banned!

From the start of the season it was obvious that the Williams-Honda was the car to beat. Whereas McLaren's TAG-Porsche had been the subject of little development, except in the area of electronics, Honda had produced what was effectively a new engine, which Williams had installed in a longer, lower carbon composite chassis; by the end of the season Williams had won nine races (Mansell five, Piquet four) and the Constructors' Championship, but when Mansell's rear tyre burst spectacularly at Adelaide, Prost slipped by to win his fourth race of the year and become World Champion again.

Renault, too, had done some useful engine work, notably in the devel-

...and the TAG-Porsche of 1983



Power down: Piquet blasting his way round Adelaide in the 1987 Williams-Honda

opment of air valve springs, and this helped Senna to win two races as well as taking eight pole positions in Lotus's special qualifying car. The only other win of 1986 went to Gerhard Berger's Benetton-BMW, which had been more competitive throughout the season than the Brabham-BMWs fitted with the "lay-down" engine specified by Brabham's Gordon Murray - a development which was partially responsible for BMW's eventual withdrawal from F1, and also led to Murray's departure from Brabham.

At Imola in 1986 the long-awaited Cosworth-built Ford turbo made its debut in a Team Haas Lola. The engine was small and light but lacked development, and the car in which it was fitted had lost its sponsor before the season even started. It is interesting to speculate what might have happened if the engine had been supplied to a team which knew what it wanted and harassed its engine-maker into supplying it, as Benetton did in 1987.

The rule change for 1987, aimed at restricting power in qualifying as well as in races, was the introduction of pop-off valves which would not allow engines to exceed a boost pressure of more than 4 atmospheres at any time. Regarding such regulations as a challenge, as they always do, the leading teams soon found they could comfortably exceed 4-bar in qualify-

ing, and thus fell little short of the 1100+ bhp they had achieved in 1986; in races the fuel situation meant they were rarely able to exceed 3.8 bar, which worked out at around 950 bhp; so much for FISA's attempt to restrict power outputs!

All of the leading engines underwent considerable development for 1987, with several different versions of Honda's 'G-type' appearing, and with Honda engines now being supplied to Lotus as well as Williams. The TAG-Porsche, too, was significantly improved, and the Ford at last had a competitive compression ratio.

In 1987 Williams-Honda again won nine races and the Constructors' Championship, and Piquet became World Champion despite winning only three races to Mansell's six. Prost's McLaren-TAG notched up three more victories, despite being generally off the pace (particularly in qualifying) and Senna's active suspension Lotus-Renault won the street races at Monaco and Detroit. Finally, at the end of the season, Berger's 90° V6 Ferrari won at both Suzuka and Adelaide to reward the Italian team for making a new engine so near to the end of the formula.

"I promise you, gentlemen; in 1988, no way for the turbos," announced Jean-Marie Balestre, President of FISA, regarding measures which theoretically were designed to equate the performance of 1.5-litre turbos and the

3.5-litre naturally-aspirated engines which had been readmitted in 1987 and which would be the only power units eligible from 1989 onwards.

Once again, Balestre and FISA got it wrong. The best of the 3.5-litre engines racing in 1988 struggled to reach 600 bhp, while most of the 1.5-litre turbos managed considerably more, particularly during qualifying. So even with a boost limit of 2.5 atmospheres and a race fuel allowance of only 150 litres, the turbos were completely dominant, running away with all sixteen races. Honda's sophisticated fuel management system enabled McLaren to race with well over 600 bhp, even on circuits where fuel consumption has always been heavy, and for qualifying Senna and Prost normally had over 700 bhp at their disposal. It will be a long while before 3.5-litre naturally-aspirated engines achieve such efficiency; 1988's V8s needed around 200 litres for most races, and 1989's V10s and V12s needed more.

At the start of 1988 there was a distinct possibility that the McLaren-Hondas, driven by Alain Prost and Ayrton Senna, would win all sixteen races. By race 12, at Monza, this had become at least a probability, but first Prost's engine detonated and then Senna collided with a back-marker with only two laps remaining. So McLaren and Honda had to settle for fifteen wins (Senna eight, Prost seven)



Benetton's first, and Berger's, with BMW: Mexico 1986

fifteen pole positions (Senna thirteen, Prost two) and 199 World Championship points, 134 more than their closest rival, Ferrari.

If there was any weakness in the 1988 McLaren-Honda package it was the transmission, which troubled both drivers on a number of occasions. The car clearly was a lot better than the Lotus in which Piquet, using identical engines, often struggled to finish on the same lap, and the engine was more fuel efficient than that of the Ferrari, which caused considerable surprise by having enough fuel to complete the distance at Monza and score the only non-McLaren-Honda win.

Honda's record, in winning 40 races out of 87 and scoring 660.5 World Championship points in five and a half years, is quite outstanding. However, the world's motor racing fans will never forgive Honda for the cavalier manner in which they abandoned Williams at the end of 1987 - astute though the move to McLaren proved to be - and Honda's obsessive support of Satoru Nakajima when there were so many better drivers available may well have cost them additional victories. By 1988 Honda and Ferrari were the only competitive turbo engine makers left. Renault had dropped out at the end of 1986 when Lotus switched to Honda, and TAG had disappeared at the end of 1987 when McLaren became Honda-powered. BMW had sold their remaining engines to Megatron - in which guise they soldiered on to the end as good mid-field runners - and the rest, such as Alfa Romeo, Hart, Zakspeed and Motori Moderni, had never really been competitive. (Hart

had consented to develop it instead of reverting to their 21-year-old V8! (By the end of 1987 the Ford turbo was more powerful than the TAG-Porsche and almost the equal of the Honda, but at this point Cosworth decided to abandon it rather than produce a 2.5-bar version which might have saved their reputation!)

In Formula 1 there is no time for sentiment, or for looking back on what might have been. My abiding memory of the Turbo Era is of Piquet's Williams-Honda at Adelaide in 1987, rocketing out of the second part of the chicane and fishtailing from one side of the road to the other as it blasted up to the tight right-hander at the top of the hill; that and some of Piquet's qualifying laps in Brabham-BMWs; and Senna's qualifying laps in Lotus-Renaults.

It was not long before chassis and tyre development enabled 3.5-litre naturally-aspirated cars to set faster lap times than the turbos, but turbocharging undoubtedly made a lot of progress between 1977, when the authorities actively encouraged it, and 1988, when it was legislated out; such, it seems, is the price of success in all things nowadays.

PE

F1 TURBO TEAMS AND ENGINES, 1977-1988 - SUCCESS RATIO

(Includes only teams and engines which won at least one race)

TEAMS	ENTERED	WON	%	
Renault	(1977-85)	126	15	11.90
Lotus-Renault	(1983-86)	62	5	8.06
Ferrari	(1981-88)	126	15	11.90
Brabham-BMW	(1982-87)	92	8	8.69
Benetton-BMW	(1986)	16	1	6.25
McLaren-TAG	(1983-87)	68	25	36.76
Williams-Honda	(1983-87)	65	23	35.38
Lotus-Honda	(1987-88)	32	2	6.25
McLaren-Honda	(1988)	16	15	93.75

ENGINES

Honda	(1983-88)	87	40	45.97
TAG	(1983-87)	64	25	39.06
Renault	(1977-86)	142	20	14.08
Ferrari	(1981-88)	126	15	11.90
BMW	(1982-87)	92	9	9.78

STATISTICAL ANALYSIS, F1 TURBO ENGINE PERFORMANCE 1977-1988

Engine	Races	Poles	Wins	Success Rate	Points
Honda	87	35	40	45.97%	660.5
TAG-Porsche	68	7	25	36.76%	405.5
Renault	140	50	20	14.28%	569
Ferrari	124	18	15	12.09%	491.5
BMW (+Megatron)	123	15	9	7.31%	244
Ford	30	0	0	0%	34
Alfa Romeo	92	0	0	0%	31
Hart	63	1	0	0%	26
Zakspeed	58	0	0	0%	2
Motori Moderni	44	0	0	0%	0



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Brazilian GP	Interlagos	March 31
San Marino GP	Imola	April 21
Monaco GP	Monte Carlo	May 12
Canadian GP	Montreal	June 2
Mexican GP	Mexico City	June 16
French GP	TBN	July 7
British GP	Silverstone	July 14
German GP	Hockenheim	July 28
Hungarian GP	Budapest	August 11
Belgian GP	Spa	August 25
Italian GP	Monza	September 8
Portuguese GP	Estoril	September 22
Spanish GP	Jerez	September 29
Japanese GP	Suzuka	October 27
Australian GP	Adelaide	November 10

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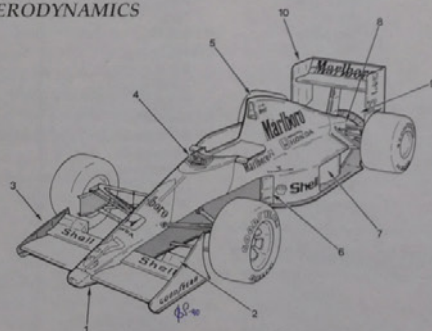
1X

The Marlboro McLaren MP4/5B is built around a carbon fibre composite chassis, revised to allow for an increased fuel capacity and utilising a unique high modulus material which dramatically enhances the technical performance of the monocoque from Hercules Aerospace. McLaren's ongoing aerodynamic research has seen significant changes to the detail profile of the side pods and radiator ducting, and the well-established tradition of separate removable upper bodywork has been retained. The six-speed transverse gearbox introduced during the 1989 season has been heavily modified for this year's car. The MP4/5B is fitted with water radiators, manufactured in-house with Llanelli cores, while all engine and transmission lubricants are cooled by Secan heat exchangers. The latest specification Brembo brake calipers are fitted, and advanced lightweight Showa shock absorbers are retained. Recently, a special "high-nose" version of the MP4/5B with revised aerodynamics was tested by Ayrton Senna at Monza.

AERODYNAMICS

- 1) McLaren retains flat bottom at the front.
- 2) A new half flap is fitted to the secondary profile to obtain more downforce at the front, giving better front end traction.
- 3) A smaller sideplate was introduced at Hockenheim.
- 4) Different windshields are used as the drivers' heights vary, and from circuit to circuit.
- 5) The air scoop for the Honda 3.5-litre V10 engine is now at the maximum height allowed by the rules: 100 cm.
- 6) The sidepods are completely new. The intake is much narrower, and the water radiator (made at McLaren us-

AERODYNAMICS



Drawing Board: McLaren Honda MP4/5B



by
**PETER NYGAARD
and BENT SORENSEN**

ing Llanelli cores) has been repositioned. The car has no oil coolers for engine or gearbox: there are Secan heat exchangers.

7) Air exits to the side of the pod: note the overhang to protect the rear wing from turbulent airflow.

8) The rear end bodywork extends further over the gearbox.

9) A new 5-arch underbody has been introduced.

10) Different rear wings are used at different circuits. The low-speed version with 3 individual adjustable profiles is shown here.

FRONT SUSPENSION

- 1) The steering rod is located at the same height as the upper wishbone (2) to lower drag.
- 2) The upper wishbone is fitted to the outside of the monocoque, whereas the lower (3) is mounted inside. This

determines the roll centre at the front.

3) The lower wishbone has a big angle between the rods (so the rear rod is fitted quite a long way back on the monocoque) giving good stability.

4) The vertical forces on the car (i.e. weight and downforce) are transmitted through the thin pullrod (4) to the bottom of the coil spring/damper unit (5).

5) The gas pressure in the Japanese Showa dampers is adjustable. The top of the dampers is fitted to the monocoque, and the lower part rolls up and down vertical rails (6), so this system goes without a rocker. This is in fact not a new concept, it was introduced at McLaren in 1988 on the MP4/4, but was also seen on the 1985 Tyrrell-Renault turbo car. Also, the location of the dampers (beside the drivers' legs - some distance behind the front axle) is advantageous, as only a shorter part of the monocoque will twist; therefore the overall rigidity is better.

7) Anti-roll system: rods (8) connect the lower (moving) parts of the dampers to the "anti-roll bar" (7). These are located in a tube (9), which allows vertical movement. It works this way: when the car is in a curve it rolls; displacement of the outside wheel is greater than that of the inside wheel. Through the rods (8), flexion is induced, and the inside wheel is lifted by the anti-roll system. The amount of anti-roll is controlled by the flexibility of the arms (7). This may be adjusted by the driver during the race.

REAR UNDERBODY

- 1) The underbody of the MP4/5B is longer than that of the MP4/5. Now it has 5 arches, with 4 vertical fins, giving 3 tunnels. The concept was introduced on last year's Leyton House March 891. The central tunnel sweeps upwards in a steep angle. This layout is only possible with a gearbox in front of the rear axle.
- 2) The exhaust gases are fed out under the floor, in two tunnels.
- 3) The underside of the underbody is completely smooth, only the hook for the garage jack disturbs the airflow.

GEARBOX AND REAR SUSPENSION

- 1) The 6-speed transverse McLaren gearbox has Hewland gearwheels, and is situated in front of the rear axle, in order to allow aerodynamic treatment of the underbody, and to obtain better weight distribution.
- 2) A new engine oil tank has been introduced.
- 3) The carbon/carbon radial vented disc brakes glow red hot during brak-

ing, due to frictional energy dissipation.

4) The latest brake calipers from Brembo are used. The temperature is measured by a pyrometer.

5) The carbon fiber/epoxy air scoop leads cold air to the wheel bearing, brake disc and caliper.

6) The rear suspension is pushrod, linked to the top of the advanced lightweight Showa damper/coil spring unit (7) via rocker (8).

9) Link connecting the dampers to the torsion anti-roll bar (10).

11) The lower wishbone is fitted directly to the gearbox.

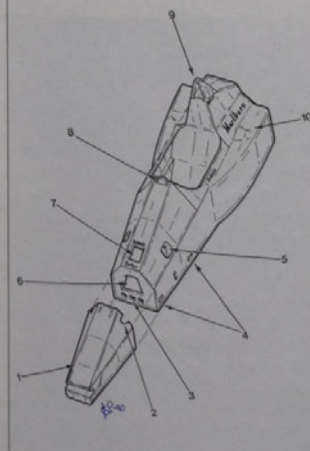
12) The transverse stabilizer rod is used to adjust the toe-in of the rear suspension.

13) The upper wishbone is shorter than the lower to obtain desirable roll centre. It is, therefore, not fitted directly on the gearbox, but mounted to a complicated lattice frame.

MONOCOQUE DESIGN

- 1) The layout of the nosebox has been slightly altered; the guide for the front wing has been changed. The box is made of high strength Kevlar fibre composites.
- 2) Cutaway for the steering and upper wishbone mountings.
- 3) The front of the monocoque itself has small holes for the brake and clutch cylinders.
- 4) Holes for the lower wishbone, mounted inside the monocoque.
- 5) Room for the dampers.
- 6) Hole giving access for the mechanics to work on the pedals (which are individually adjusted for the driver) and steering (7).

MONOCOQUE DESIGN



8) The new MP4/5B monocoque is higher than the original MP4/5, due to new safety regulations and the fact that new driver Berger is somewhat taller than teammate Senna. Laminate plates are bonded to an aluminium honeycomb core. Also, the monocoque is "box" type; made of flat plates (rather than curved shell elements, as most team use these days), which are easy to manufacture.

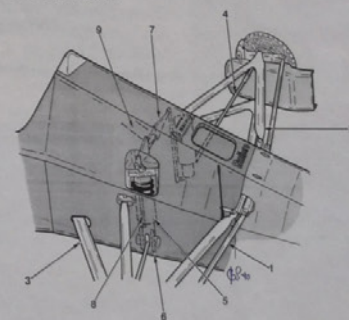
9) The size of the roll-over safety bars over the driver's knee (8) and above

his head (9), has been increased to suit Berger. The roll-over bar over the driver's head (9) is integrated into the engine air scoop.

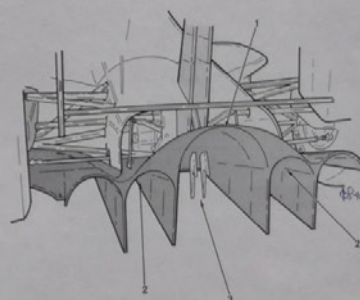
10) The fuel tank is extended to the sides to maintain a desirable wheelbase and accommodate a longer V10 engine. Inside the tank is an ATL Kevlar fibre reinforced fuel cell of the latest highly flexible rubber material. The fuel tank capacity has been slightly increased.

PE

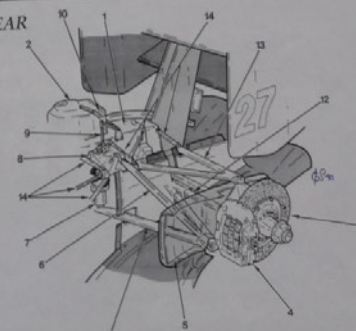
FRONT SUSPENSION



REAR UNDERBODY



GEARBOX AND REAR SUSPENSION



Once again, it has been a busy month with a lot of action on the model car front and, of course, a lot of action on the Grand Prix front too. I know, for example, that a lot of collectors and enthusiasts have been waiting for some time for last year's Osella, which was going to be released by Tameo.

Unfortunately, Tameo later withdrew the car from their range, leaving many people disappointed. Happily, however, Meri kits have come to the rescue and the kit for the Osella should be available from most local dealers now priced at about £18.95.

Also in the shops at the present time should be most of the 1990 cars. They should be available in 1/43 scale and, once again, Meri have pulled one over on Tameo by supplying paint and seat belts with their kits at no extra charge.

The following are the latest range of what is new in 1/43 scale: Benetton B190, Tyrrell 019, Williams FW13B, Brabham BT59, Lotus 102, Ferrari 641/2, McLaren MP4/5B and the Leyton House CG891. Most of these should be in the shops in both Meri and Tameo form.

Ferrari 641 - by Starter Kits of France.

One of the best versions of the Ferrari 641 I have seen is a resin kit produced by Starter of France. Most people will remember Starter kits for their range of group C cars such as the Le Mans entrants they concentrated on. This new Ferrari kit comes complete with heaps of photo-etched parts and decals to make Prost and Mansell's car look really good. This is a really nice kit in my opinion and I hope Starter go on to produce plenty of other F1 kits. If that is the case, then the other manufacturers will have to really watch out because the Starters will be real quality. Priced at about £20.95.

1/12 Tamiya Ferrari F189 r/c
More good news this month has been the recent release for r/c fans of the 1989 Ferrari which is well worth a look. I have not yet been given a price for this particular kit but I am sure it will be around the £80.00 mark.

Older kits still around

While out for a beer recently, I was tapped on the shoulder by a *Prix Editions* reader who wanted to know what older kits are still around. By older, he meant 1930's, 1940's and 1950's. After accepting a few liquid bribes, I agreed to try and find out more for him and here follows a list of

some of the older models available:

Alfa Romeo Bimotore, 1935, Nuvolari, FDS
Lancia Ferrari D50, 1956, Fangio, FDS
Ferrari 500 F2, 1952-53, Ascari, FDS
Alfa Romeo 159, 1951, Fangio, FDS
Alfa Romeo 158, 1950, Farina, FDS
Mercedes W163, 1939, FDS
Alfa Romeo 12C 1936, Nuvolari, FDS
Ferrari 625, F1, 1955, Trintignant, FDS
Cooper F1, 1959, Brabham, FDS
Ferrari, Peron, 1950, Ascari, FDS
Maserati, 250F, GP Pau, 1954, Musso, FDS
Maserati, 250F, 1959, Fangio, FDS

There are plenty more of these sorts of older kits around and many are listed in a publication called *TSSK*. This retails at £3.50 and a copy is on its way to my drinking partner John with *Prix Editions*' compliments.

Mailbag replies:

Mr. A. Fletcher, Kirkbride, Scotland: The best solutions for applying decals to models are called Microsol and Microset. They retail at around £2.29 a bottle.

Mr. G. Dundas, St. Helens: Yes, a model of the Tyrrell sixwheeler has been made in 1/43. Three versions were on the market a few years ago. One from Western Models, which is now very hard to come by; one from FDS of Italy, which is still on the market, but very hard to track down; and one produced by Tenariv of France, alas, no longer on the market. The last was not a very impressive model however.

Once again thank you to all readers who have written in. If you wish to write to me, please do so *C/O Prix Editions*, enclosing a stamped addressed envelope, and allow up to four weeks for a reply. Thank you. Until next month.

Allen Syms,
Just Cars Anyway.



Answers to Quiz No.6 - 1984

1. Elio de Angelis 2. Alfa-Romeo 3. 7
4. Nigel Mansell 5. USA East (Detroit)
6. Piercarlo Ghinzani 7. Jo Gartner 8.
Belgian GP 9. The Nurburgring 10. 3.

Winners of the Duke Marketing videos

Mr A M Duncan, Aberdeen; Mr D Addison, Manchester; Mr D Clayton, Northants; Mrs J Wilkes, Warks; Diane Greenwood, London; Mr R N Moran, Oxon; Mr I Williams, Huntingdon; Mr T Smallman, Peterborough; F Nimry, London; Tina Terry, Manchester.

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Mr M Sidaway, Canterbury
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Prize Draw: Gold McLaren Winner

We invited new subscribers to *Prix Editions* to enter our draw for an 18-carat gold-plated model of the McLaren MP4/5 hand-built by Luca Badoer in Italy and generously donated by Just Cars Anyway. The winner of this handsome and unique prize is Mr Andrew Cross of Middlesex, so many congratulations to him.

Autoglass/Leyton House Competition Winner

Autoglass, sponsors of the Leyton House team, generously offered a free trip for two to the Portuguese GP and dinner with the team's charming drivers, Mauricio Gugelmin and Ivan Capelli. Eating out in style thanks to Autoglass was Paul Loasby of Notts. How come the Editor gets none of these perks...?

The answers were:

1. Brazil 1987 - though the first race start had to wait until San Marino 2. Dustin Hoffman 3. British GP 1988 4. Monaco 1987 5. Japanese GP: he led for all of 200 metres in a naturally-aspirated car 6. Tyrrell, AGS 7. French GP 1989 8. 3rd, Brazil 1989 9. He injured a foot in Saturday's free practice 10. Monaco 1989.

A SIDEWAYS LOOK AT 1982

1. Keke Rosberg was World Champion. How many Grands Prix did he win in that season?
2. Who were the drivers in the Brabham team that year?
3. Which race weekend started with a drivers' strike?
4. Which two drivers were excluded from the Brazilian GP results after finishing first and second?
5. Where did the great Gilles Villeneuve lose his life?
6. Who secured the first victory of his career in Austria?
7. Where did the Swiss GP take place?
8. Which driver returned to Ferrari after a 10-year absence - and took pole position in Italy?
9. At which race did Renault score the only 1-2 finish of their career as constructors? Which US circuit hosted the final race of the season?
- 10.



PIT

FALLS

Life on the pit lane's lighter side

SEEING LIFE IN BLACK AND WHITE

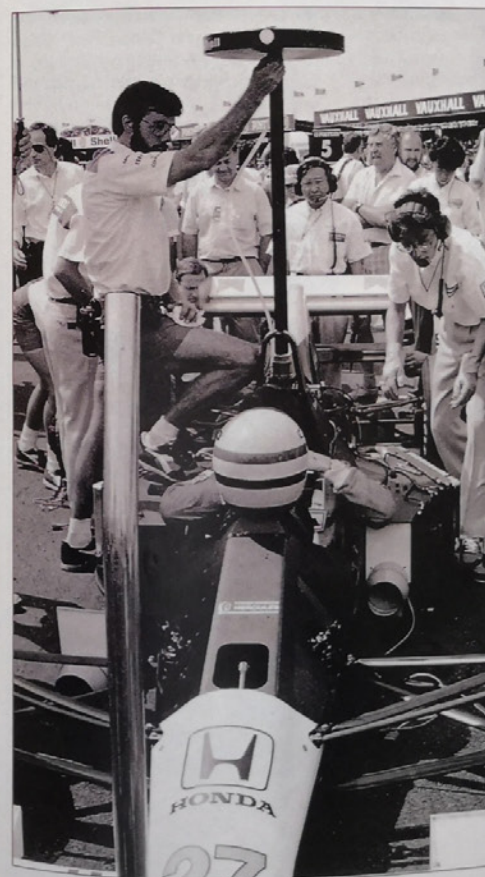
Formula 1, as we all know, is the world's most colourful sport - but it can look pretty funny when you see it in black and white. Just for a change, we thought you'd like a few monochrome smiles...

Look: it's no longer Delboy, it's Delgirl! We knew there were going to be changes in Derek Warwick's Formula 1 life, but isn't this taking it a bit too far?

Smiles? What are we saying? If this man fell in the pits there would be something close to an ecological catastrophe... and Silverstone, where the picture was taken, might be wiped off the map!



(Matthias Schenker)

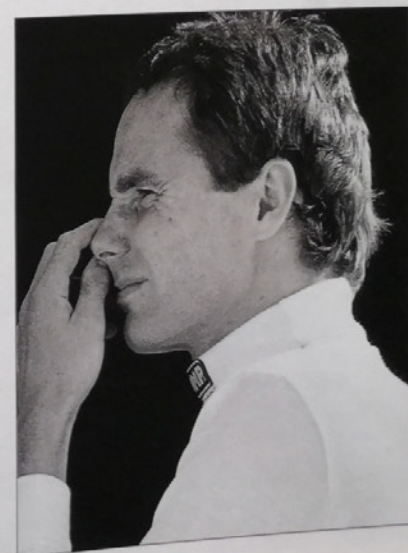


(Matthias Schenker)

Silverstone again - and Stefano Modena is either drawing attention to another of his fabled superstitions or pointing out in no uncertain terms that a Grand Prix driver does not necessarily walk away with his pockets full of loot...

How can you become World Champion wearing your helmet back to front??

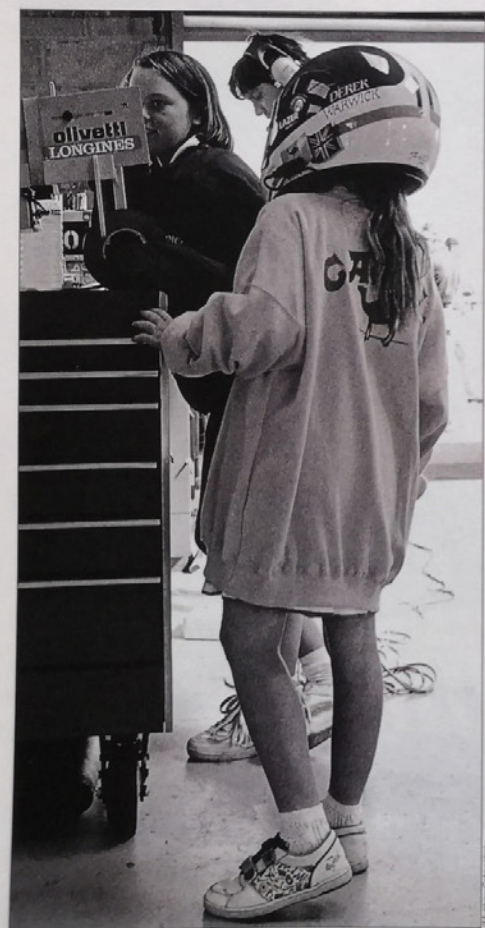
Nice one, Gerhard...



(Matthias Schenker)



(Matthias Schenker)



(Matthias Schenker)

GAULD MINE

The starter churned and the engine burst into life sounding like a sewing machine and producing about as much power. I slid the stubby gear change along two notches and selected first gear and drove off from the Hotel Rocca in Bazzano near Modena. Within a few yards I realised I had trouble with the car so I drove to Modena railway station and took the train to Milan and my first foreign World Championship Grand Prix! The car, by the way was a Heinkel bubble car with a healthy 15 b.h.p. engine and just why I had driven such a car over the Alps to Modena is a story filled with such pathos and drama that I will not go into it here.

The year was 1958, a momentous one for Grand Prix racing. Two months before, Juan Fangio had retired from motor racing after the French Grand Prix where he drove one of the latest Type 3 Maserati 250F1's. Now, here at Monza, the sister car was being run by a rotund and genial American called Temple Buell and the driver was Masten Gregory. A few days before I had been introduced to Buell by one of the legends of motor racing, Hans Tanner, who had quite naturally latched on to Buell and was as-

sisting him in his bid for Grand Prix fame. At the time Hans had told me confidentially that the Gregory car was the actual car Fangio had driven in France but the fact was that the two Buell cars - the other was raced by Carroll Shelby - had been ordered new by Buell.

I was a freshman to this kind of deception but then Hans was one of the great characters of motor racing and few people ever found out very much about him. He was a Swiss with black patent leather hair and a pencil moustache and acted as a journalist-cum-fixer in these days when both journalists and fixers were thin on the ground.

Very few people knew very much about Hans, but as he lived in Modena he was always around to catch the gossip and mop up any rich Americans who needed help. He ran a regular column in *Motor Racing* magazine which was one of the classic racing magazines of the 1950's and he scored remarkable coups by having road tests of all the famous racing cars of the day such as 750 Monza Ferraris and 3-litre Maseratis. It was only much later that most of us realised he never actually drove these cars and in fact there was even doubt as to whether he ever had

a driving licence as none of the gang can remember him being seen behind the wheel of any car.

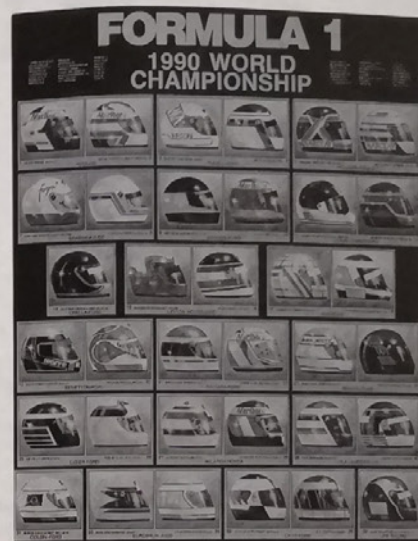
He was a great adventurer type and was a close friend of the Marquis De Portago. In 1959 Hans disappeared for some time and there were stories going around that he had joined Fidel Castro in the hills to help Castro fight for the freedom of the Cuban people but this story didn't wear very well for Hans Tanner was in fact a close friend of the Cuban dictator Batista and used to help with the organisation of the Cuban sports car Grand Prix.

When Temple Buell arrived and bought two Grand Prix Maseratis in the summer of 1958 Hans was there to help him spend his money. Masten Gregory, that great journeyman driver, was also there to drive the car. By that time it was becoming uncompetitive against the Dino Ferraris and the Vanwalls but Masten drove his usual brave race finishing in fourth place.

As for Hans he was down in the pit, beavering, making deals and planning his next "Road Test". Sadly for us all he was later to go and live in California with his girl friend until one day in a fit of depression he shot her to death and turned the gun on himself. It was a sad end to a great character in motor racing and a character who made the mould for some of the merchant adventurers who were to follow.

PE

Masten Gregory at Monza in 1958, still able to shield his eyes from the sun through a 150mph corner



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BASEBALL CAPS - £5.99. Fully adjustable (fits all head sizes). Full colour design on front (as above) available in red or yellow.

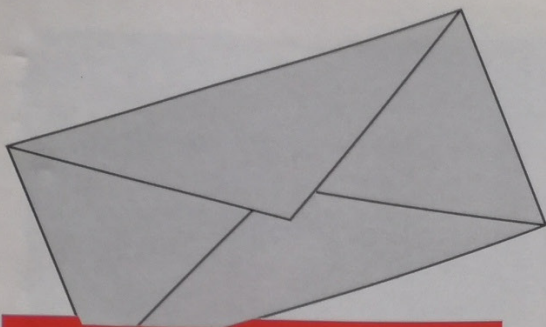
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Letters to the Editor

In response to Maurice Hamilton's recent "On the Other Hand", I do not feel the British press would lose complete interest in Grand Prix racing due to the retirement of Nigel Mansell. I have noticed that over the last two seasons especially the British press have spent almost as much time writing about another Grand Prix driver who is definitely not British.

Ayrton Senna is probably THE most written about and talked about driver in Formula 1 today. He is quiet, shy, unremarkable to look at but very talented and he has caused a storm in Formula 1.

I have even noticed that most writers have discovered he is not the bad guy Alain Prost made him out to be, so don't tell me the British racing press will lose interest when they write as often about Senna. It wasn't Nigel that Steve Ryder interviewed on *Sportsnight* at the start of the season, but Ayrton Senna. It is not Nigel's car that figures in the opening titles of *Grand Prix* on BBC2, but Ayrton's. If that doesn't prove a point, nothing will. Ayrton Senna is the most intriguing driver ever as far as the press is concerned and it will not be until he retires that they will lose interest.

Miss Renee Paula Sharp
Newcastle-upon-Tyne

And will it be Nigel's Williams-Renault that figures on tv next year?

After witnessing the recent disgrace at the Hungaroring, I would like to offer an early - and hopefully premature - word of congratulation to this year's Constructors' Champi-

ons, the new Saddam Hussein of Formula 1: McLaren-Honda.

BJ Slade
Brechin, Scotland

I am amazed at the stupidity of Honda choosing Nakajima, of all people, to represent Japan. Why don't they choose Suzuki? Aguri is young, fast and smooth, unlike Nakajima who is fairly old and slow. Think back to '88: with Nakajima driving the Lotus-Honda he scored only one point. This is the right stage in Aguri's career, I only wish Honda would wake up and see that.

Matthew and Timothy Melville
(aged 11 and 9)
Malvern
Worcestershire

I am writing to you as a motor sports fan first and a Formula 1 fan second. *Prix Editions* is a high-quality magazine and gives excellent coverage of F1. However, I was very annoyed when I read the introverted and short-sighted article by David Phipps on tobacco sponsorship (vol 4 no.7). Towards the end of his article he digressed into the field of Group C sportscar racing and proceeded to demean it as a second-rate series, not worth sponsoring and watched by no-one.

I cannot disagree more strongly. Ask any "man in the street" what the most famous race is and I am certain he will reply "Le Mans 24 Hours" (a small group C race, Mr Phipps). In case Mr Phipps does not know, Le Mans attracts over 200,000 fans, the

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press and television, every year, from all around the world. It offers sponsors the best advertising platform anywhere in motor sport. I have been to only three races this year (all WS-PC races at Silverstone, Le Mans and Donington) and even with the recent domination by Mercedes the races were fantastic, vastly more exciting than watching the same humdrum procession of Formula 1. Perhaps if Mr Phipps attended a WS-PC round he would see "what they are waiting for".

Lawrence Sims
High Wycombe
Bucks.

No need to preach Le Mans to an Editor who has lived there and saw his first 24 Hours as long ago as 1967! But in those days the crowd was 500,000, and Le Mans is sadly a high-profile exception in the context of the WS-PC - to which it has not even contributed in recent seasons - Ed.

In these days of fax machines potential correspondents may find it easier to send their letters that way.

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The Last Word



As a fearless frontline reporter I have faced some tough assignments in my time but none that quite compares to joining the rest of the British F1 journalists for three days R and R (or L and L as the Japanese press call it) on the beach in between the Portuguese and Spanish GPs. The schedule was hectic: wake up 11am; breakfast 11.30, sunbathing with cocktails, before a two-hour lunch break, surrounded by PR ladies in bikinis that were shorter than a quote from Ayrton Senna. Life was indeed a beach. Unfortunately the life of sun sea and sand in the typewriter was thrown into disarray by the rumour that Mansell had signed for Williams. The Fleet Street hacks, terribly overweight on a diet of sex, Sangria and seafood, had to leave off posing as Lotus Eaters, as, in a frenzy of apathy they scrambled for the phone. When I say scrambled, try and imagine a very tanned beached whale covered in Ambre Solaire trying to get up with a fagin one flipper and a full glass in the other.

Those of you using pacemakers or people who are easily shocked should assume the seated position before reading the next phrase - Ayrton Senna has a sense of humour! Arriving late for the pre-race driver briefing at Spa, Ayrton found that no seats were available. The warm-hearted Mr. Balestre insisted that a fellow FISA official give up his seat for the charismatic Brazilian. In less time than it takes Jean Alesi to retire from a Grand Prix the seat collapsed leaving the best paid bottom in the world on the floor. "So Jean-Marie" says the Brazilian bard of the bon mot, "still bear me a grudge after our little argument last year?" Much laughter and smiles from everyone in the room including Balestre, although a smile from the latter is akin to watching a rattle snake exuding charm after failing a crash course at a finishing school.

With only a few races left on the F1 calendar this is the time of year when the press start composing those idiotic articles along the lines of "The ten best drivers in F1" or "My ten most memorable moments of the season". Ligier's Philippe Alliot has produced something of a dilemma for writers of this type of article as his crash in the Portuguese GP accounted for, not the tenth but the eleventh Ligier chassis he has destroyed this season. TV viewers were able to watch Alliot, the only man to spin more often in his lifetime than he is ever likely to in his grave, walk back to the pits surrounded by autograph hunters. What the prince of the piroouetting pilotes did not realise is that one of the signature seekers was in fact a cleverly disguised insurance salesman who finally succeeded in getting Alliot to sign a disclaimer which will save Ligier a fortune on insurance for the last few races.

I discovered in Estoril why Murray Walker occasionally confuses his Ferraris and his Scuderia Italias. While enjoying lunch at one of the team motorhomes he was about to put some raspberries on top of his ice cream dessert until one of his staff pointed out that the "raspberries" were in fact pieces of chopped beetroot.

The F1 motorhomes are always the scene of intrigue and plotting on a scale that would make Machiavelli seem like a choirboy. Therefore on race day in Spain everyone wanted to know why the Benetton and Ford PR ladies were deep in conversation inside the rival Honda bus. It turned out that they were seeking clarification as to the exact location that they had been given as the venue for their team press conference at the Japanese Grand Prix. Much mirth from the Honda engineers as it turns out to be a Registry Office; even more mirth

when Honda's PR man Eric Silbermann exclaimed, "How appropriate, marriages and press conferences are both events where people stand up and make promises they have no intention of keeping and lie about their past".

Men in power have to learn to tell jokes but also occasionally take them on the chin so here is a low blow aimed at a FISA supremo - Why must you never ask Bernie Ecclestone the time? Because the big hand will be on the twelve and the little hand will be in your pocket. The press man who told this joke and no longer requires his media pass is... aaargh!

With next year's driver line-up pretty much settled by the time the circus got to Jerez, the only top line place still available seemed to be with the "Didcot Dynamos" at Williams so the door on the team bus was opening and closing more often than the entrance to a Mexican brothel on "Ladies Night". No doubt trying to escape from a vehicle littered with drivers, Alesi letters of intent, (available in ten languages, out on video, CD and cassette), and handbooks titled "How to build your own Ferrari 641". Sheridan Thynne, the team's Marketing Director finally escaped from the bus, slumped into a chair and announced to nobody in particular "1990 is turning out to be a very long day".

The Spanish Grand Prix is the scene for the annual Press versus Photographers Football Match and this year Derek Warwick was called in to play for the lensmen. Sitting on the touchline he witnessed one of his team mates get a nasty gash on the nose. He was persuaded on to the pitch and in fact scored two goals.

Jumbo

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1989 TESTAROSSA - White/Tan
1987 TESTAROSSA - Red/Black
1986 TESTAROSSA - Red/Tan
1986 TESTAROSSA - Red/Black
1984 BOXER, 512 BBi - Red/Tan
1983 BOXER, 512 BBi - Black/Black
1983 BOXER, 512 BBi - Black/Tan
1977 BOXER, 512 BB - Red/Tan
1971 365 GTB/4 Spyder Conv. - Red/Black
1969 365 GT 2+2 - Red/Tan
1969 365 GT 2+2 - Burgundy/Tan
1969 365 GT 2+2 - Blue/Red
1967 330 GTC - Black/Red
1967 330 GT 2+2, Single Headlamps - Red/Black
1967 412A - White/White
1964 400i, 5 SPD - Blue/Tan
1961 400A, CONVERTIBLE - Grey/Tan
1960 MONDIAL CABRIOLET T - Red/Tan
1958 MONDIAL CABRIOLET QV, 3.2 - Red/Tan
1958 MONDIAL CABRIOLET QV - Black/Tan
1955 MONDIAL CABRIOLET QV - Silver/Tan
1955 308 GTS - Black/Tan
1954 308 GTB - Red/Cream
1952 308 GTSi - White/Blue
1977 308 GTB - Yellow/Black
1977 308 GTB - Black/Black
1959 250 GT PININ FARINA COUPE - Silver/Red
1958 250 GT PININ FARINA COUPE - Red/Red
1967 275 GTB/4 - Yellow/Black
1974 246 GTS DINO - Silver/Black
1972 246 GT DINO COUPE, Bk. Inserts - Black/Tan

■ LAMBORGHINI

1988 COUNTACH - White/White
1985 JALPA - Red/Tan
1971 ESPADA - Ivory/Tan
1968 400 GT 2+2 - Red/Tan
1967 400 GT 2+2 - Red/Black

■ EXCALIBUR

1967 ROADSTER - Brown/Tan
1965 ZIMMER - Black/Black

■ MASERATI

1972 MEXICO - Burgundy/Tan
1967 MISTRAL - Champagne/Tan

■ JAGUAR

1974 XKE III, V12 - Silver/Red
1974 XKE III, V12 - Burgundy/Black
1973 XKE III, V12 - Green/Tan
1973 XKE III, V12 - Burgundy/Tan
1970 XKE II - Yellow/Black
1970 XKE II - Blue/Black

■ ROLLS ROYCE

1987 CORNICHE - Black/Tan
1987 CORNICHE - Blue/Cream
1985 CORNICHE - Silversand/Tan
1984 CORNICHE, 90 Updates - Black/Red
1984 CORNICHE - Chestnut/Tan
1983 CORNICHE - Lt. Blue/Blue
1982 CORNICHE - Nutmeg/Tan
1981 CORNICHE - Blue/Beige
1979 CORNICHE - White/Tan
1968 SPUR - Dk. Oyster/Tan
1968 SPUR - Black/Magnolia
1967 SPUR - Chestnut/Brown
1967 SPUR - Silversand/Tan
1966 SPUR - Ebony/Black
1966 SPIRIT - Black/Tan
1965 SPIRIT - Black/Tan
1977 WRAITH - White/Blue
1965 PARK WARD - Walnut/Tan
1937 25-30 - Black

■ BENTLEY

1989 TURBO R - Blue/Cream
1988 MULSanne - Black/Red
1987 CONTINENTAL CONV. - Green/Tan
1961 S2, 2-TONE - Silver/Red
1952 JAMES YOUNG, RHD - Blue
1964 PARK WARD Cnv. RHD-UK Taxes Pd.-Red/Tan

■ ASTON MARTIN

1976 DBS, V8 - Brown/Beige
1969 DBS, RHD - White/Black
1966 DBS, RHD - Red/Red
1988 VOLANTE CONV. - Grey/Grey

■ MERCEDES-BENZ

1939 300B CONV. - Black/Blue
1960 300SL - Black/Tan
1957 300SL - Silver/Black
1957 300SL, Needs Restoration - Blue/Tan
1956 GULLWING - White/Blue
1955 GULLWING - Black/Black
1955 GULLWING - White/Red
1955 GULLWING - Red/Tan
1955 GULLWING - Silver/Red
1956 190SL, HARDTOP - White/Green
1968 600 SWB - Burgundy/Tan
1990 500SLs, NEW - Choice

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1988 MARCH V8 CHEVY ILLMORE
INDY — EX FITTIPALDI
1988 MARCH V8 CHEVY ILMOA
1988 PORSCHE 962 - IMSA
1987 FORD PROBE GTP
1978 MAZDA RX-7 GT2 - Yellow
1977 FERRARI 308GTB, Fiberglass - Red

■ OTHER

1966 COBRA REPLICAS - Red/Black
1967 AUSTIN HEALY - Red/Grey
1933 AUSTIN AMERICAN - Blue/Grey
1965 ALFA ROMEO GTC CABRIOLET - Blue/Blue
1964 ALFA ROMEO 2600 ROADSTER - Red/Black
1964 ALFA ROMEO SPINT - White/Red
1959 PORSCHE 356 CABRIOLET - Red
1959 PORSCHE 356 COUPE - White/Black
1961 CADILLAC CONVERTIBLE - Blue/Blue
WESTFIELD LOTUS XI - Green/Black
1961 DELORIAN - Stainless/Black
1973 TRIUMPH STAG - Yellow/Black
1971 CITROEN SM - Silver/Black
1981 BMW M1 - White/Blue
1966 CORVETTE 427/425 HP - Blue/White
1989 LINCOLN T/C STRETCH LIMO - Blue/Blue
1988 LINCOLN T/C STRETCH LIMO - White/Tan
1988 LINCOLN T/C STRETCH LIMO - Black/Grey

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